

THE
AMERICAN
JOURNAL OF INSANITY.

EDITED BY THE

MEDICAL OFFICERS OF THE NEW YORK STATE
LUNATIC ASYLUM.

VOL. XXXIX.

The care of the human mind is the most noble branch of medicine.—GROTIUS.

Reprinted with the permission of the American Psychiatric Association

JOHNSON REPRINT CORPORATION
111 Fifth Avenue, New York, N. Y. 10003

JOHNSON REPRINT COMPANY LIMITED
Berkeley Square House, London, W. 1

First reprinting, 1965, Johnson Reprint Corporation
Printed in the United States of America

121565L
200

AMERICAN JOURNAL OF INSANITY, FOR JULY, 1882.

DIFFERENTIATION IN INSTITUTIONS FOR THE INSANE.*

BY DR. R. S. DEWEY,

Superintendent of the Illinois Eastern Hospital for the Insane, at Kankakee, Illinois, &c., &c.

It is evident from even a casual survey of the field occupied by insanity and institutions for the insane, that the question of suitable and sufficient provision for the large numbers in every community afflicted with mental maladies, is becoming more and more complex.

On the one hand the victims of insanity are multiplying at a rate which renders it uncertain when or where the maximum will be reached, but does not admit of doubt, that at least two in every 1,000 of our population will need asylum accommodation.

On the other hand, the State is beginning to recognize fully its obligation to provide for those whom insanity renders helpless, and to appropriate liberally and expend carefully immense sums for the erection and maintenance of institutions for relief and cure. While year after year the total amounts available and employed seem to afford care for only a minority at best, and often an insignificant minority, of the whole

*Read at the annual meeting of the Association of Superintendents of American Institutions for the Insane, held at Cincinnati, May 30 and 31, and June 1 and 2, 1882.

number. This state of affairs brings all concerned in the matter face to face with the subject of expense. It is seen in most parts of our country that with the average amounts of money at present appropriated, and the present average cost of institutions, it will require a period of from twelve to twenty years to meet the wants of the actual numbers of insane now existing; without reference to the very great augmentations of these numbers to be expected with each year in most of the newer communities.

It is plain that we have been falling behind in our race with this subtle but swiftly advancing disorder of insanity, that we are in danger of losing still further ground, and that if we are to come off victorious at last, public opinion will have to be greatly enlightened, and public interest quickened in the direction of fuller and more complete provision, while all possible modifications reducing the cost of erection and maintenance of asylums will become subjects of most careful study.

But it is not alone the amount of insanity and the vast expenditure involved in its proper care that leads to perplexed inquiry, it is also the great and increasing variety of the forms it assumes.

Formerly few distinctions were drawn among the insane, and indeed in the public mind to-day, little or nothing is known of any differences existing, but all victims of insanity are regarded with equal impartiality as being in a state equally far removed from intelligent sympathy, while personal knowledge of, or contact with, such unfortunates is regarded either with abhorrence, or only with unmixed and ignorant curiosity. But those who are charged with the care and treatment of the insane, and those who have studied the problems bound up with suitable provision for all, know that there are grave questions connected with the large and

increasing numbers in whom insanity is associated with crime, with drunkenness, with epilepsy, with congenital defects.

Finally, the increasing enlightenment and humane impulses pervading all departments of charitable work in our own day, and the high specialization in each department lead to an effort to separate the individual somewhat further from the class, and treat every case upon its own merits rather than, as in times past, to manage the individuals only as so many units all counting alike and of equal value with reference to a series of purely mechanical evolutions, connected with the daily routine of a great institution for the insane. But experience has gradually shown that the personality even of an insane pauper is a distinct thing, which, for the best results, must be recognized and understood upon its own peculiar merits. And this last mentioned fact increases greatly the arduous labors of those conducting institutions for the insane, who in aiming at the highest measure of usefulness, recognize the need of attention to individual conditions, peculiarities and wants, in each one of the hundreds under their care, and yet are charged with maintaining economy, discipline, safety and order throughout a great establishment.

It therefore appears that in the important economical questions arising from the magnitude of numbers of the insane; in the essentially wide differences separating different classes of insane persons, as the epileptic, the criminal, &c., and in the effort to individualize more thoroughly each case upon its own merits, many difficulties are encountered which merit earnest attention.

These masses of insanity may be compared to a bundle of rods held threateningly over the prosperity of our communities. Combined as one whole they are formidable, and it is perhaps only by separating and

attacking them in detail that we can hope to break their force for evil and overcome at last these great obstacles lying in the path of social progress.

I have sought to present herewith a brief sketch, suggesting some means which are perhaps available for simplifying the vexed questions we are called upon so loudly to answer.

I would first inquire whether there are not certain groups or classes into which the insane naturally fall, whose wants should be separately considered, for the reason that their treatment ought properly to be conducted on principles different from those guiding the treatment of the ordinary insane.

As the number of insane increases in any given community, we find three forms of insanity continually coming to the front and forcing themselves on the attention, by reason of the special difficulties, dangers and inconveniencies encountered in their management.

These are the insanities complicated:

- I. By epilepsy.
- II. By crime.
- III. By alcoholic excesses.

Now, for these many years, we have seen the mischief and injustice wrought by the above forms of insanity, from their being thrown promiscuously into all our ordinary asylums, and have heard the urgent pleas put forth for the needed special care and provision.

It is not necessary to argue here in detail the points with which all are so familiar.

I. The epileptic insane form a class not fitted for association with ordinary insane persons. Indeed, they are already refused admission either as a whole or in part in most of our asylums, and are thrown in great numbers upon the county infirmaries, jails and prisons.

To obtain some idea of the number of epileptics, convicts, criminal insane, and insane from alcoholic excesses, in our asylums, a letter of inquiry was recently addressed to about thirty institutions. A reply was received from twenty. According to these replies, there were six hundred and forty-six epileptics in an asylum population of ten thousand two hundred and eighty-eight, or an average of thirty-two in each asylum with an average population of five hundred and fourteen. A proportion of sixty-four to every one thousand asylum patients. This only shows the number in asylums, and from the fact that some of these institutions do not receive epileptics, and nearly all discriminate against them in admitting patients, giving, of course, the preference to curable insanity, it is likely that in every State, a large majority of the whole number are outside of institutions. But even upon the figures given, every State with three thousand insane has not less than one hundred and ninety-two epileptics; adding to this number the equal or greater number outside of asylums, it is plain that every one of the more populous States would have sufficient cases of epilepsy to make a separate institution economical as well as useful in the highest degree, and one object worthy of persistent effort in every State would be the establishment of an asylum for epileptics of sufficient capacity for all, very plainly but comfortably arranged.

Of such numbers as are under consideration, if an institution were provided, the large majority could sleep in a common dormitory, with the night supervision, which they especially need, which would be as efficient and much more economical from a structural point of view than having the single dormitories for each one such as they now require in the State hospitals, where they crowd out curable patients needing

such an accommodation much more than themselves. To such an institution every known insane epileptic in any given State should go whether at present in or out of an asylum.

Thus would be avoided many of the frightful tragedies of which we read, in which one or more revolting murders have been committed, without warning, by an insane epileptic, for whom admission had perhaps been vainly sought at the overcrowded asylum, or for whom friends, as he was "sane most of the time," had never taken steps to have proper provision made.

If objections were made to the massing of epileptics in one institution, I would say, first, that the question is one of what is possible, not what might be most agreeable, especially when an element dangerous to life is under consideration; second, that the epileptics do not appear to have any mutual repulsion, but rather are peculiarly prone to find congenial society among themselves, as has been often observed. And further, that when epilepsy has gone to the length of producing insanity, it may be said that both the epilepsy and the insanity are practically incurable.

If the number of epileptics were not sufficient to warrant a special institution such as has been established in some European countries, and also found necessary in New York, a special and properly constructed ward in connection with each institution should be furnished.

II. In reference to insanity associated with crime, we may first very briefly dispose of the consideration of insane convicts. There is but one opinion with reference to the flagrant wrong and injustice of sending them to our ordinary asylums.

The information obtained with reference to convicts shows that asylums have an average to every one thousand asylum patients of over thirteen, although

four out of the twenty institutions heard from receive none of this class.

From an extensive correspondence held about four years since with penitentiaries and asylums throughout the country, and from tables then carefully compiled, I learned that insanity among convicts, as shown by the number in asylums and penitentiaries, was sixteenfold more frequent than among the population at large; and as there are not less than two insane among every one thousand of the population, there would be not less than thirty-two insane for every one thousand convicts. Any State which had one thousand five hundred convicts would have forty-eight insane among them. The actual figures then obtained showed that Ohio had fifty insane convicts; Pennsylvania, seventy-five; Illinois, twenty-eight; and New York, ninety-eight, actually under care, without reference to the number (well known to be large) of those who had escaped from asylums, or whose sentence had expired. This leaves out of view the number whose insanity remains undiscovered in the penitentiary, or does not cause sufficient trouble to lead to separation from the ordinary convicts. Further, there remain outside of this calculation the large number of unconvicted criminals, certain of whom are just as proper subjects for a convict asylum as the convicts themselves. Concerning the number of these I will have occasion to speak further on.

For insane convicts totally separate provision is demanded by every consideration of safety and humanity. The question requiring most careful consideration however, is with reference to unconvicted insane persons who have committed crimes. Many of these belong strictly to the criminal classes, independent of their insanity, and are on the same plane with convicts; while at the other extreme are those persons of prev-

iously innocent and reputable lives who have perpetrated a criminal act only as a direct consequence of their insanity. Between these extremes are all possible combinations of the criminal and insane characteristics, respectively. Those who had been held to be most abandoned criminals have often been found by a careful investigation insane and irresponsible. Monstrous crimes have been committed with malice prepense by palpable lunatics, while insanity is often falsely urged as a specious and dangerous plea in extenuation of crime. There are criminals who simulate insanity with surprising and sometimes successful skill, criminals who have inherited and grown up with such depraved and defective brains and minds that they can not be held responsible like healthy persons, and criminals whose vices have rendered them incapable of controlling their acts. There are the epileptic criminals, a most perplexing class. On the other hand, there are lunatics who know perfectly well the nature of their crime; who are able to distinguish the moral quality of an act, and who are actuated by a criminal motive. There are lunatics who are wholly delirious at the time their crime is committed and have no subsequent recollection thereof. Other lunatics plan and execute their crime deliberately, methodically and skilfully, alleging some fantastic reason in its justification. Insane persons are met with who feign insanity in some other form in the hope of escaping from the consequences of their crime: finally, who of us has not met with asylum patients who knew right well that they would enjoy immunity for any crime they might commit because they had been pronounced insane, and who only lacked the opportunity to perpetrate any deed that malice or revenge might suggest?

But there is, nevertheless, a strong probability that if other things are equal, any insane person who commits a crime, whether culpable in the eye of the law or not, is of an inferior moral organization. It should be possible to find an appropriate place for each class of insane perpetrators of crime. A certain small proportion of them might properly go to the general insane asylum, possibly an occasional convict might be found who would rightly belong there, and duly constituted authorities should determine the matter in each instance in accordance with the actual character and merits of the individual. Either full discretion resting with the court or a commission for which legislation should provide, passing upon the merits of doubtful cases; provided always that there existed, as there does not in the length and breadth of our land to-day, except in the State of New York, any institution to which insane criminals can be consigned, although it has never been claimed, so far as I am aware, that they were proper subjects for association with the ordinary reputable insane, and all would admit the abstract justice of separating criminals from the latter.

I suppose efforts have been made in all the more populous States of the Union, to secure separate accommodations for insane criminals. In Massachusetts, and Ohio, and Pennsylvania, and Illinois, where earnest work has been done in this direction, failure has thus far been the history. New York, alone, to the credit of her alienists and law-makers be it spoken, has secured such an asylum.

The difficulties have hitherto proved insurmountable from the lack of public appreciation of the importance of the matter, and from the comparatively limited numbers needing accommodation, which would have rendered the erection and maintenance of a separate

establishment of the kind in any one State disproportionately expensive.

In England, the celebrated criminal asylum of Broadmoor is an example of what the general government can do in relieving the ordinary asylums. This asylum accommodates four hundred or more inmates who are mostly persons acquitted on plea of insanity, though there is also a large number of convicts. England has, in addition, a proprietary asylum which receives two hundred more of its insane criminals—Fisherton House, near London. Ireland, Scotland and Prussia, have each separate establishments designed for the care of criminal insane.

The number of unconvicted insane acquitted on plea of insanity is difficult to estimate, so loose are all the regulations affecting them, and so complex are the facts to be weighed. The number actually reported from fourteen out of twenty institutions shows that an average of eight is found in each with five hundred and fourteen average asylum population. This amounts to over fifteen in each one thousand of insane in asylums. The majority of these would probably be proper subjects for a criminal asylum, and added to the convicts, makes a number of desperate and unmanageable insane persons sufficient to cause extreme anxiety and annoyance in every asylum, as well as every community, with reference to their care, and yet not sufficient in any but the most populous States to warrant the erection of a separate institution.

It is possible that the government of the United States, like that of England, Prussia, and other European States, might be disposed to look favorably upon a plan for erecting one or more criminal district asylums, to receive the insane criminals of a given number of States lying contiguous, and thus relieve the common-

wealths already over-burdened with their insane. If such a plan could be carried out, a complete, well organized, economically managed, and in every way creditable institution might be secured, since the larger numbers to be provided for in one establishment would admit of every facility being employed without extravagance. The States participating in the benefit of such an asylum could well afford to pay for the maintenance of such as they might send to its care, rather than attempt a single-handed struggle with this problem, and the expense to the government would, in such a case, be mainly that of providing the necessary buildings and grounds.

All convict insane should go to this institution, and in addition to these, all insane persons who had committed capital crimes, who might be regarded as primarily and essentially criminals though perhaps in fact unconvicted.

The experience to which we have been subjected in the past few months of seeing appalling crimes committed or attempted by insane persons, ought to bear fruit in the shape of a thorough system of separate provision for insane criminals. The public at large now seems to be awakened to some extent with regard to the danger attendant upon leaving persons suspected of insanity, and especially of homicidal mania, without proper examination and surveillance.

Such is the lesson of the murderous assault upon Dr. Gray, and of homicides, fatal casualties and other deeds of violence without number, which we see almost daily chronicled by the press. Again, every large asylum contains a considerable number of insane persons whose malady is known to take the direction of attempts upon the life of those about them. Such attempts, in spite of every precaution, occasionally meet

with success. Few are the institutions which sooner or later do not have to record these unhappy experiences. They are within the knowledge and recollection of all, and the recent tragical fate of Dr. Adams, at Kalamazoo (one of the saddest of them), serves to emphasize the need of special provision for dangerous and homicidal patients, which need might be still further brought out by a review of the long, sad list of similar occurrences in past years. The ordinary curative hospitals and asylums are arranged with reference to granting all possible privileges to their inmates. They do not have, and ought not to have, the rigor and severity of all regulations which are indispensable in the care of dangerous or criminal inmates, and yet an insane person who has once taken life, unless beyond all peradventure the chance of a repetition of such an offense is past, should not enjoy the privileges of the ordinary asylum. Individuals with such tendencies should be hedged about with precautions, those who have taken life before going to the asylum, those who commit or attempt such acts in the asylum, and those who exhibit propensities in such a direction should be made subjects of a most careful examination, and there should be means of removing them from participation in rights and privileges which the ordinary insane may safely enjoy, but which are inappropriate in the presence of impulses toward crime. There should be a criminal asylum available for all of the insane in whom criminal tendencies are predominant, whether convicts or unconvicted, since persons of this latter class, as is well known, often exhibit insane atrocity scarcely paralleled by the convicts themselves.

III. Finally, with reference to inebriate insane—those in whom alcoholic excesses are the primary cause of brain and nerve disease and decay—I take it there can

be no doubt our already over-burdened asylums should not be called upon to perform, for cases of this kind, the work of reformation; of detention until the alcohol has evaporated, or of permanent confinement. There are few institutions that are not obliged to count many "dipsomaniacs" or delirium tremens patients among their inmates, frequently peculiarly injurious in their presence, and certainly both requiring other than asylum treatment themselves, and occupying room sadly needed by those who are more properly beneficiaries of institutions for the insane. For this reason appropriate measures should be taken to exclude such persons from asylums for the insane, and special asylums of their own provided for them.

The number of cases attributable to alcoholic excesses, as obtained from fourteen institutions, was an average of thirty-one to each with average population of five hundred and fourteen. This would give fifty-four to each one thousand insane persons in asylums. But the number of this class committed to asylums forms only a small part of the whole.

Such additional legislation as may be needed for the purpose of relieving ordinary institutions for the insane, of the epileptics, the criminals and the drunkards, should be persistently advocated, and correct views upon these subjects disseminated until these grievous embarrassments to the usefulness of our asylums are removed.

Turning now to the ordinary asylum, let us inquire what advantages it would gain by being relieved of all its epileptics, all its convicts and insane criminals, and all its inebriates.

The sources of danger, of anxiety, of mischief and injury would be lessened to a considerable extent, and the difficulties of supervision simplified, or at least

those which consist simply of detention, performance of guard duty and protection, would be greatly lightened while opportunities were at the same time increased for that which is the proper work of the asylum, remedial treatment and the affording to the patients, of care, of comfort, of occupation, of freedom from irritation, &c.

The forms of insanity uncomplicated with epilepsy, criminal propensities and drunkenness, would still subdivide into the acute and chronic, and the alternative with which we are all so familiar would still present itself, of either separating or attempting to separate these in two classes in different institutions, or else, by receiving all, of increasing the capacity of each institution beyond the recognized proper number to be accommodated in one building, since it is a total impossibility to secure the requisite number of institutions to care for all, while the number remains at only two hundred and fifty or even only six hundred in each building.

Asylums in all parts of America are constantly exceeding the highest of these figures in the number of their inmates. Out of twenty taken at random whose capacity I have just had occasion to notice, seven had over six hundred. It becomes more and more evident that the policy adopted by the law-making power will be that of massing large numbers in some form of buildings under one management, as the expense involved seems imperatively to dictate this course.

This policy as pursued heretofore has led to modifications in asylum construction and additions to asylums already existing, which are numerous and diverse, but which go to show one thing, viz.: that annexed, detached or supplementary buildings have a purpose which they answer and that study and experience will lead to the selection of certain forms found definitely useful after

opinion and practice have had time to crystallize. The following are some of the ways in which asylums have undergone changes and additions. They have been divided into male and female departments with fully equipped separate buildings for each sex. In some cases the overflow of patients has been accommodated in detached structures of various sorts. There have been separate refractory departments, separate large buildings for the harmless demented. Large establishments have been built devoted to the chronic cases alone. Old farm-houses already existing upon the premises of several asylums have been made over and utilized for the more trustworthy patients. Several asylums have put up specially cheap houses receiving from thirty to sixty of the above class. Such experiments as this have been necessitated in some cases by the unfortunate destruction of the main building by fire.

The operation of these cheaper structures in all their various forms, while attended with inconvenience, and in some cases with dangers, has been reported in the main as rather unexpectedly satisfactory.

The points to be considered in employment of such buildings are economy of structure, safety of the patients, and avoidance of risk from fire. The latter is secured to a great extent (where absolute fire-proof construction is of course impossible on account of expense) by having moderate sized buildings only two stories high separated by sufficient distance, or connected either by fire-proof passage-way or a light connecting corridor easily removable. There is a considerable proportion of patients who are safe enough in such buildings if judiciously selected. The amount of supervision and medical attendance which they need being small, comparatively, is not difficult to secure, and the economy of these structures is a matter of course, and is indeed the reason of their existence.

From the experience obtained by various experiments of this sort, it may be considered established that all the patients do not need to live in one building of the strict form of construction generally adopted, and indeed necessary in the main, but many can get on as well or better in dwellings somewhat more nearly like a common house, but of larger capacity and rendered considerably more secure.

Such structures of a good class can be readily put up for one-third the amount a complete asylum on the linear plan would cost, and less than that if the latter is thoroughly fire-proof in its construction.

In view of all the experience gained in the use of various detached and supplementary buildings, at different asylums, it now seems fair to raise the question whether the difficult problem in regard to separating acute and chronic cases will not be met by an application of the principle of differentiation in buildings, to meet more closely the wants of different classes.

I will venture here to give very briefly, for what they are worth, my personal experiences in managing patients in detached wards, and the convictions at which I have arrived. The Illinois Eastern Hospital for the Insane at Kankakee, at the time when I first became connected with it, had been committed to a course of what might be called experiment in the direction of cheaper construction and of providing separate buildings for the chronic insane who were inoffensive and industrious.

An appropriation had been made for "detached wards," and a general plan for a group of three such structures already existed in the mind of Rev. F. H. Wines, Secretary of the Illinois State Board of Public Charities, who had up to the time of my appointment acted to a considerable extent as adviser to the Board of Trustees in special matters with which he was very fa-

miliar, and to whom would now largely belong either the credit of success or the demerit of failure in the working of this special feature of the hospital.

I entered earnestly with Mr. Wines upon the effort to put these ideas concerning detached buildings for the milder insane in practice. Without going too much into details, I will state such results as have thus far been attained. In the three buildings above mentioned are one hundred and six male patients, this being slightly more than one-half of our total male population of two hundred and one. These houses each accommodate between thirty and forty patients. Nearly all the patients sleep in large associate dormitories. There is a common dining-room for all in the middle building. This building is divided into two halves in front, each half receiving twenty-two patients. The food is prepared at the general kitchen and conveyed to the common dining-room, a distance of about six hundred feet, in an ordinary two-wheeled cart. The common dining-room has a little kitchen of its own where the tea and coffee are prepared.

The material of the buildings is limestone. They have cost less than three hundred dollars per capita, the appropriation being thirty thousand dollars, and their capacity being one hundred and five or six without crowding. They are heated by steam carried under ground from the central boiler house four hundred feet distant. The buildings stand about seventy feet apart, and are not connected in any way. They have ordinary wooden blinds and ordinary windows with 16x20 panes of glass. No window guards are used except in three rooms of one of the houses, namely, one dormitory with seven beds, one single dormitory and one day room. The windows in two of the wards have a wooden block screwed in to prevent the sash from

opening more than about five inches at top and bottom. The other two wards have no window guards, and are not kept locked during the day.

These buildings have now been occupied over a year and a half. They were gradually filled up with carefully selected patients. The average of patients at these wards for the past twelve months has been ninety-five. Something over fifty per cent of the patients in these buildings have been continuously paroled or have occupied the unlocked wards, with the privilege of going and coming at pleasure, in the day time. During the month of April last, seventy-one per cent of the patients in the detached wards were kept steadily employed. During May, thus far, only sixty-four per cent have been employed, because the number of attendants to take them out and work with them was temporarily deficient. An average of over seventy per cent are usually employed. The proportion of attendants is one to ten, the same as in the main building. The working of the plan adopted in these buildings thus far in general and in particular has been without untoward accompaniments of any kind. There was at first a disposition on the part of some harmless patients who were on parole, to stray away, but an improvement has been noticed in that respect. In the first seven months with an average of fifty-one patients, fifteen strayed away. They were all either at once returned or remained with friends. In the next six months with an average of ninety, seventeen escapes occurred. Of these all but two were promptly returned or remained with friends or at county house.

In the six months last past, with an average of ninety-five, only four escapes have occurred from the detached wards, whether of paroled or non-paroled patients, and

two of these were quite promptly returned. In all, from the beginning, twenty-nine elopements have occurred of paroled individuals and seven of the non-paroled. Three persons made two escapes each, and one person three escapes. In the total number of escapes, of patients from the detached wards, all returned or remained with friends (nine returning voluntarily) except four. Of the four not heard from up to the present time, one was a convalescent farm-laborer who perhaps found work. One was a stupid dement; he escaped through an attendant's carelessness. I should have apprehended he would not know enough to care for himself. It seems probable, since any serious mischance in his case could hardly have failed to become known, that he drifted into some county infirmary. The other two not heard from, were inoffensive industrious men who had labored about different asylums for years, enjoying considerable liberty.

I can not in candor say less than that the patients in these detached wards have done well. No cases of accident or injury of any kind to person or property have presented themselves by day or by night, among either the patients themselves or between patients and attendants.

The patients sent to the detached wards have all been under observation for some time in our main building, and their previous record and present conditions and tendencies have been carefully considered. No case in which the history was bad, or it was believed risk would be incurred, has been transferred to these buildings. An especially useful purpose has been subserved in the employment of these buildings, in allowing convalescent patients to have a trial in them before returning home.

The conclusion which, it seems to me, is legitimately deduced from an experience such as these detached wards have afforded, is that there is a certain usefulness for buildings of this class. They should in no manner interfere with the hospital proper, such as is now generally in use throughout our country. This latter is the only appropriate place for the acute and violent cases, for the suicidal, for the feeble and sickly, for the majority of recent and curable cases, but its work may be properly aided and supplemented by the employment of cheaper and more plainly and simply constructed houses, which will serve a good purpose for the quiet, industrious and inoffensive, chronic insane, and thus save them perhaps from banishment to a dreary and hopeless separate abode; secure for them care and attention such as they individually need, while they are at the same time enabled to live in a more domestic way, to enjoy more privileges as well as to be kept more usefully employed and occupied.

Finally, to briefly recapitulate the line of thought imperfectly and hurriedly presented in the foregoing pages, it is believed that proper provision for the great and increasing numbers of the insane renders readjustment of means to ends desirable, if full accommodation of the whole number is ever to be attained; since insanity has in the past increased at a more rapid rate than measures of relief could be carried out.

One great advantage would be obtained by the removal of epileptics, criminals and victims of alcohol from the ordinary asylum. These classes being removed and more properly and economically provided for elsewhere, the great masses of the acute and chronic insane could be managed more satisfactorily and more cheaply by still further differentiation among themselves, in

an establishment combining the necessarily elaborate and expensive curative hospital for acute and violent cases, with subordinate structures of a very much cheaper, but sufficiently good character, for the inoffensive chronic insane. The form of these buildings and the extent to which they can be used are still *sub judice*, but experience has shown that they can serve an important purpose for at least a considerable number.

A CASE OF PERVERTED SEXUAL INSTINCT. (*Conträre Sexualempfindung.*)

BY G. ALDER BLUMER, M. D.,
Assistant Physician, New York State Lunatic Asylum, Utica, N. Y.

The attention of physicians was first directed to the existence of perverted sexual instincts by Professor Westphal,¹ of Berlin, in 1869. A few years previously there were published in the German capital, under various pseudonyms, a series of letters from one C. H. Ulrichs,² an Assessor, in which the author made the assertion that a great many persons, "as a result of their inborn nature, felt themselves drawn by sexual desire to male individuals exclusively," while they had no sexual feelings toward the other sex, and indeed, in many cases, had a perfect horror of women. He called these men "Urnings." Westphal, however, as already stated, was the first to consider the subject scientifically, and described the affection under the name of "*Conträre Sexualempfindung.*" He defined the anomaly as "a congenital perversion of the sexual instinct, with retained consciousness of the morbid character of the condition," and cited two cases in support of his thesis. Subsequent observers have, from time to time, added, from their personal knowledge, to the literature of the subject, till the record of cases in which the anomaly has been recognized and described now numbers seventeen. The latest contributions are to be found in the *Allge-*

1. Die conträre Sexualempfindung. Arch. f. Psych. Bd. II., Heft, I., S., 73-108.

2. Vindex, Inclusa, Vindicta, Formatrix, Ara Spei, Gladius furens, Kritische Pfeile, &c. Leipzig (Otto u. Kadler), 1864-1880.

*meine Zeitschrift für Psychiatrie*¹ and *Brain*² for October, 1881, from the pens of Professor von Krafft-Ebing and Dr. Julius Krueg, respectively; and the writer is induced, by a perusal of these interesting papers, to report a typical example out of his own practice. The peculiar interest in his case lies not only in the fact that he has access to a number of letters, etc., in which the patient seeks to explain, justify or extenuate his strange feeling, but also in the original methods which the latter pursued in order to gain the affection and esteem of the man toward whom he felt himself so irresistibly drawn. Moreover, Mr. X., being a man of more than average intelligence and culture, affords us, by reason of his well-written compositions, an exceptionally good insight into the psychical condition of men of the unfortunate class to which he belongs. In this latter respect the case bears strong resemblance to that of Ulrichs himself, as reflected in the series of letters in which he attempts to vindicate the position of his fellow-sufferers or (to borrow his term) "Urnings."

Mr. X. is about twenty-seven years of age, and of high social status. Height, considerably below the average; muscular development, good; hair, dark, profuse in growth, parted in the middle and brushed well back; eyes, dark brown, large, brilliant and swimming; pupils dilated; long eyelashes; mouth small; teeth, regular and sound; chin, somewhat pointed; general contour of face, oval; expression, womanly. Lower limbs, short in proportion to trunk, but well developed. Sexual apparatus believed to be normal. Gait, precise; strides, quick and short. Voice and intona-

1. Zur conträren Sexualempfindung in klinisch-forensischer Hinsicht, *Allg. Ztsch. f. Psych.* Bd. XXXVIII. pp. 211-22.

2. *Perverted Sexual Instincts*, *Brain*, Vol. IV., Pt. XV., pp. 368-376.

tion, like a woman's; lisps in pronouncing certain words. Capillary circulation, poor; extremities, frequently cold. Head often flushed and hot, and complains of headache. Has occasional attacks of vertigo, and asserts that at such times he is obliged to seize some object to prevent him from falling. Has fallen and suffered a momentary loss of consciousness. Sleep frequently disturbed. Has dreams and nightmares, awaking *en sursaut*. Declares that he has sometimes found blood on his pillow. Probably practised onanism when younger. Nocturnal emissions of unusual frequency.

Family History.—Father, vacillating, eccentric and phlegmatic; mother, emotional and affectionate. Has two brothers in good professional standing, and one sister, the latter a twin with himself. They were born when their mother was considerably beyond the child-bearing epoch. No insanity acknowledged, although eccentric relations have been spoken of.

Career and Characteristics.—As a child, showed no disposition to mingle with boys of his own age and adopt their pastimes. Very precocious, and developed an early interest in literature, himself writing prose and poetry when quite young. Passionately fond of music, a brilliant pianist and composer of weird-like impromptus. Occupations and tastes essentially womanly. Fond of discussing women's dress, in which he is always *au courant*. His own dress is always precise and natty, showing more especially in pattern, style and arrangement of necktie a taste and deftness rarely found in men. Conscious of his youthful, unmanlike appearance, he is very sensitive on the subject, and resents imputations of womanliness. Admires manly men, frequently speaks of them, and extols all that is noble in his own sex. Seldom speaks of women, is

indifferent to their charms, and expresses a horror of matrimony, the very idea of marital relations being repugnant to him. Admits that he has on several occasions been approached by men of unnatural desire, and declares his unspeakable horror of pæderastia. Has in conversation said that these latter individuals are able to recognize each other. Began the study of law, but finding its dry details distasteful, soon abandoned it for literature in which he achieved early success. Conceives plot very rapidly, and is restless, nervous, and uneasy pending the completion of story. His characters are eccentric persons. Writes considerable poetry, dashing off sonnets without apparent effort. Without being offensively egotistical, fully appreciates his talents, and anticipates great literary success. Refers with pride to the patronage which has been bestowed on him by leading publishers. Is good to the sick and poor, and takes pleasure in charitable work. Is exceedingly urbane, and a great stickler for the amenities of social life. Punctilious in regard to table etiquette; has a fastidious and capricious appetite, eating in a nibbling, mincing manner like many women.

It would appear that Mr. X. first met his ideal friend in the street, and, although neither spoke, from that moment loved him. One of the earliest references to the subject is found in a remarkable essay on "Affection," a portion of which is here reproduced:

I am diffident to touch on much of this subject, for all grand minds have written and preached of it through all ages; and yet it is as young to me as Eden was to Adam. I take the old authorities and say, "What can you teach *me* by *your* love? Can you teach *me* love? No; for love is not taught, is not a teacher, but is myself revealing myself unto the acute meaning of life and years." I love my friend! While I write the words my heart beats swifter; there is a happy mist before my eyes. I love my friend! I may have loved him forever — I only know I love him

now. I look on thousands of faces — they are his. I look to the blue sky and the clear white water; I feel the air that reaches me with its crystal fingers lovingly; I watch for sleep to touch me kindly — and it is all my friend. I look forward to seeing him, only to have him see me — I would go miles just to hear him utter my name; I go past the house wherein he lives and a glad thrill comes over me; I watch, and wait, and hear him, as I hear a clock softly turning the minutes toward the hour which shall be the last of my loneliness, and I shall have what best can give me joy. Pain? What is pain? I have it when I think he does not see me rightly, when I think he does not know me well, when I feel he is not near me in thought and outreaching. And yet this pain vanishes when I so much as have him near me for a moment; he sees me not at my best, because love opens our souls to the one we love, and all of our childish weaknesses and lackings look out of our soul's windows crying unto that one for sweet compassion and gentle forbearance. When I work, it is for him; when I think, it is for him; I love to-day, because it is his — I love to-night, because, perhaps, to-morrow will lead him nearer to me than to-day did. I would love to be noble in soul, and pure in every feeling, so that maybe he might be touched by my striving and hold me closer to him; I wish that years might go quicker, that he might guage my feeling by its power to withstand duration. What more can I say — what more can I say? I read that love is a sweet insanity. Love is the washing of the marble called Sanity until the chaste shimmer takes on the radiance of the warm sun and gleams white and brighter than the orb that shows it forth. I am too young to preach against older authority. Authority is but the lash, and youth the hand that holds it. I am too young to vouchsafe my opinion in contradiction to those who found love wanting — to those who say they loved once. "They never loved who say they loved *once*" — for as years and life can not be understood until our humanity no longer needs them, so affection reaches past time and death and calls it "*once*." Forever! It has been said that love weakens the intellect. That can not be truth; the greatest events throughout the world have been but the instigation of strong and healthy love; those intellects that grow weak under the infliction of any great shock, are those that take their love from its face made by other men in books, or sayings, and have no power to wield their own against the quiet foreign tongues of those others. I hold that affection is absorbent; but so is heaven: it absorbs earthly life into celestial. And

yet, I feel that I can grieve while I feel deepest and fondest — it is when I hope I may be cared for as I care. Perhaps in certain natures affection is more grasping than in others, as life was more to Christ than it appears to us — he died for it! And so with constant hope that sometime my friend shall see me as I grow wistful for him to see me — with many, many sad hours when I think of him away from me, my best refuge and strength. I would willingly work for — I would fondly live for him (not die for him, for death proves willingness to give over work), and I grow hopeful and blest, and often exacting, for I am only exacting because I would exact that he should care for me. All this is what I call Love. It may not be expressed as I would have it — but can love be expressed by words, or even thoughts? Love is its own expression! And as years shall be known when we no longer need them, when life shall be known when we reach past our pleasant bodies, so may I wander timidly up to God, and though my friend shall in that future have left me, have seen in me so many weaknesses and dreary failings, and shall no longer care for me, I hope that in the Light God's voice may sound like my friend's when He says: "Child, thou hast understood Earth's life and years — thou hast loved! Thou hast understood Eternity and eternal life — thou hast loved! What can make thee most happy among the peace and the rest after thy long trial and labor — what want hast thou carried with thee unto me?" And I hope I may not be timid when I shall answer that old, familiar-sounding voice, and say: "I want — my friend."

The intensity of Mr. X.'s feeling for his friend is eloquently portrayed in the above, and we have a further reference to their meeting and its results in the following extract from what purports to be a diary:

This is June 5th, 187—. I shall write no more silly platitudes in this little book [*Mallock's Is Life Worth Living?*] which has worried me since I have had it. I met to-day a man whom I may never see again, or know, but the instant I saw him I loved him, and before he had spoken a word — I am in a maze. He is not one, I think, who could care for me, for I should judge him to be very sensible and honest, but I know I love him and thank God for leading me into the light at last. I do not believe I am wicked or cold, nor have I been, but it has taken this stranger, whom I saw but a few minutes, and who, perhaps, has never thought of

me since, to awaken me. His face is retentive and concentrative; I suppose he is cold and phlegmatic. I am so happy, and I want him so much. I hope the Lord will lead me to know him, and have him know me. I should like him to care for me, for already I feel that it would be sad to have him think slightly of me. *Deus adest!* 16th July. I know him, I know him, I know him! I suppose I am a fool, but he has grown on me so that I pray for him every night. I think he is not the man to be very fond of a foolish fellow like me, so trivial and—but I am honest, I know I am, and though introspection has taught me to doubt my abilities, I know it has shown me to myself to be very wistful and earnestly hopeful for this man's tenderest qualities. Bah! What a fool I am—and people won't show me they think so!

After the date of this remarkable entry, Mr. X. found almost daily some pretext for visiting or writing to his friend, and at the same time sent him many presents. The incompatibility of temperament was such that the object of all this admiration was unable to comprehend or reciprocate the feeling. Mr. X. surmised this and made constant apologies for his effusiveness. He wrote:

A dreadful Frenchman—whose name does not deserve perpetuation—has said that in all affairs of a tender nature one of the interested parties loves, and the other consents to be loved. I naturally believe in this somewhat. * * * * Please believe me, that as much as I hate protestation and scenes of all descriptions, yet within the past two months you have made me happier than I had been for a very long and dreary while. * * * * If you have faults they can not affect me. I do not estimate any possible dereliction; I estimate you. And although I am sure that I have been overly effusive in my acquaintance, believe me that I have been as honest and true in it, and while knowing that I needs must place myself lower in light than I should be, in manifesting myself so to you, I have had the gratification of feeling that although you might jest at my uncalled-for preference, yet if you recognize the earnestness of it all, you could but respect it.

Mr. X.'s visits now becoming of almost daily occurrence, his friend felt constrained to request him to make

them less frequent. The suggestion had a very depressing effect on Mr. X., and we find in his diary the following sorrowful entry :

August 1. If I should die to-day, I know God would love me for my feeling for ——. I am a little grieved, though, for I have been so blinded by my own beautiful feeling, that I may have forced myself upon him ; for he sent me a cold little note which has hurt me very keenly, till I feel like going out and mingling with all the many careless people I know. I don't know if I shall see much more of — after his note, which I suppose I merited and courted, but heaven knows he is more to me than all the world besides, and after I have gotten over this foolish choking feeling, I shall think of him gladly and not with the feeling of slight I have now upon me. I am so powerless, I know, to make myself near to him, but I had hoped to try, to try very hard, indeed. Oh, me ! oh, me ! oh, me ! I am very weak, indeed, and I had hoped to be strong ! But he shall never know ; it would make him laugh at me. I shall not open this book again—this foolish register of foolish want. But I should like to add another word to it.

What you are to him ! Wouldst know it true ?
As much as he is unto you !

What a fool I am ! What a fool I am ! What a fool I am !

As might be imagined, Mr. X. did not long remain absent. Further explanations and protestations were made; visits, letters and poetry became more frequent, and his friend gradually reconciled himself to the irksome situation. Mr. X. was at all times exceedingly jealous of the slightest attention shown to others, whether male or female, and did not hesitate to indulge in cynical disparagement at their expense. At the same time he lost no opportunity of impressing upon his friend the many sacrifices which he made in devoting his sole attention to him. He not infrequently referred to persons of high degree with whom he professed to be acquainted, and to the receptions for which he had received, but on his friend's account declined,

invitations. He never introduced the latter to these distinguished personages, nor did he ever present him to his own family. All this while he did not appear happy. His habitual expression was one of sadness; he never laughed, and seldom smiled. Poems he wrote innumerable, all breathing his vague, unsatisfied and insatiable longing. The following is given as a fair sample :

My soul, upon the threshold of thy love,
Is timidly waiting thee to bid it come.
Must it plead all its want that thou mayst hear,
And, entering as a beggar, take thy cheer ?
Or must it yet be dumb,
A poor and strange dove,
And keep its wondrous burden for thine eyes
Because thou wilt not see its tender quest,
And bid it rest,
Without the abject taunt of inquiries.
Ah, outside doth it stand, loving and lone,
Waiting to give thee gifts that God doth love,
Waiting to sing thee songs the harps above
Might tremulous long to catch their leastest tone.
Outside, outside, 'mid all the storm of thought,
'Mid all the war of doubt, yet fond and true ;
Rise, thou, and open wide ! The love unsought
Is a too God-like thing to barely sue,
Is a too Christ-like thing to not have pain,
And die for what it would, surpassed its strength ;
Is a too earth-like thing to come again
Once more after its days' allotted length.
Open, and take my soul and call it thine,
And give to it what it can offer thee,
A God-like will that Christ-like doth design
To give to earth His own eternity.

Thus far we have seen nothing in the methods of Mr. X. to distinguish them from those which have characterized the morbid love-making of other "Urn-ings."

Soon, however, Mr. X. became the alleged recipient of anonymous defamatory letters concerning his friend. These were written in an evidently disguised hand and were frequently mis-spelt. They contained references to matters of which but one or two persons, including Mr. X., were aware, and the writer, whoever he might be, appeared to keep a constant watch over the movements of the two men. The following is given as a sample :

Mr. X. : Why are you so wrapped up in your particular friend, giving him far more than any other would willingly concede to any one, when he is wholly unworthy and deceptive to you, and true to but one instinct, and that is himself.

One you do not know, but who knows of your friend.

Mr. X. alleged that these communications were handed to him by a mysterious person who met him on his return home from his friend's residence. He never appeared, however, when, as frequently happened, they were together.

Mr. X. was apparently much distressed on account of these sinister persecutions, but far from losing confidence in his friend, became more and more demonstrative. He wrote concerning the above :

In reading this cowardly anonymous note over again, I am yet pained and can not get rid of the pain easily, for it reflects so much upon myself. Just as though anything anybody could say to me could influence a feeling that is stronger than my poor self—and I hold self is stronger than anything else in the world. * * * * And yet it makes me wonder if, as this creature sees me so oddly, you also fail to quite comprehend me, and if I am derelict in expressing all that I would. * * * I can not help it —, that I am so much with you ; I can not reason myself out of the restlessness that is mine when I want to see you. I own to being as a foolish child in this matter, and often blush to think I must show you too much of myself and that possibly you smile in your good, old way, thinking how much more manly it would be to keep to myself all that I show.

A great number of these anonymous letters were written, all containing the vilest aspersions on the character of Mr. X.'s friend, to whom, however, they never came directly. On one occasion, particularly, Mr. X. seemed to be more than usually moved in consequence of the persecution. He returned suddenly to his friend's residence one evening, pale, trembling and apparently alarmed. He had met the mysterious enemy face to face, and been stared out of countenance by him, and wept like a child in narrating the adventure. He professed to be so much harassed by this affair that he proposed to engage the services of a detective who should unearth the author of the anonymous letters. In a few days he not only informed his friend that the guilty one had been discovered, but detailed the very ingenious methods of the detective whereby the end had been accomplished. Oddly enough, the latter was represented as positively refusing to disclose the name of the letter-writer unless prosecution were intended. A promise was said to have been exacted from the anonymous letter-writer, however, to henceforth discontinue his evil practices.

Meanwhile circumstances arose which necessitated a separation of the two men, and great was the grief of Mr. X. He lost flesh, ate little, slept less, was pale and miserable. He wrote letter after letter to his friend in his changed abode, sometimes twice a day. Finally there came one which opened his correspondent's eyes to the fact that his credulity was being trifled with. It was a circumstantial letter in which Mr. X. stated that he had been dining at the — Hotel, with Count and Countess Franchi "fresh from the land of the Cæsars," and one Fitzgerald Gordon, a distinguished foreigner, both parties having come from New York for the express purpose of meeting him. It would seem as if,

emboldened by his success in former deceptions, he had been tempted to risk his reputation for truthfulness to the utmost, for this letter contained such improbable statements that the most credulous might detect their falsity at a glance. Proof positive was readily obtained from the hotel authorities who stated that no one bearing the names referred to had ever been guests in the — Hotel. Mr. X. was at once suspected of being himself the author and writer of the anonymous letters, and indeed very slight comparison was necessary to establish the identity of the handwriting. His manifest earnestness and sincerity, together with the absence of apparent motive on his part, had disarmed all suspicion. Further reflection suggested innumerable instances of what became, in the light of this revelation, the most barefaced lying and deception, till the vast array fairly staggered the man who had been the object of Mr. X.'s solicitude and affection. When accused of guilt, he protested his innocence, and after forging the handwriting of others, to lend additional force to his asseverations, wrote :

You know that for various reasons I have acted in many ways in some things other than I would have acted had everything been happier for me. * * * * You must not think me a hypocrite, nor that I have been false to you. If you believe what you accuse me of, only God can help me, and I am not afraid to ask God's help. * * * I have hoped for your good and prayed for it, so help me God. You cast me off without a hearing, and take nothing into consideration. But you surely are jesting—and yet your letter seems serious. * * * * I thank God for having brought you to me, and pray Him that I may be rendered clean unto you, and I yet must say I ask Him to bless you for all that you have done for me and many others and let you in time see me as I deserve to be seen. My own integrity, past any false appearance, must uphold me in this dreadful time.

Remarks.—It has been held that there is a neuro-psychopathic taint in all cases of perverted sexual

instinct, and the foregoing is no exception to the rule. The incompatibility of temperament in the parents, the advanced age of the mother at the time of Mr. X.'s birth, as well as the fact of his being twin with a sister, are interesting elements in considering the etiology of the affection in this case. The vertiginous attacks, momentary loss of consciousness, crying aloud in the night in nightmares, and the occasional presence of blood on his pillow (*i. e.*, if patient stated his case truthfully), all point in the direction of epilepsy. Moreover, the moral obliquity evinced in the writing of anonymous defamatory letters, while he professed subjective and presented objective symptoms of the keenest distress on account of the annoyance which his friend thereby suffered, the uncalled-for lying in regard to "Count and Countess Franchi" and other distinguished people, besides innumerable other instances of mendacity, likewise suggest the wickedness of the epileptic. And yet the unreliability of the patient with reference to his sufferings, taken in connection with his general appearance and undisturbed intellectuality, makes the writer chary in accepting this theory. May we not take into consideration a desire to elicit sympathy, and regard his falsehoods and anonymous letters as devices to raise himself in the estimation of his friend, by showing him how great were the sacrifices which he was willing to make, and how impossible it was to shake his confidence? Be this as it may, there can be no doubt as to the sincerity of his affection, and even to this day he bears him naught but good will, and would fain have the friendship renewed. There was a painful realization of the anomaly on the part of the patient, although, as Krafft-Ebing observes, this consciousness is not a constant symptom. It was lacking in four of his cases. The writer is convinced that

in this case there was nothing more than a vague, platonic, transcendental longing. Certain it is that side by side with his *horror feminæ* existed an equal aversion for pæderastia.

Krafft-Ebing has an appendix to his recent article¹ in the shape of an interesting review of the present and future position of society and jurisprudence with reference to *conträre Sexualempfindung*. He insists that the anomaly must not be confounded with pæderastia, although admitting the possibility of the combination in rare instances. He points out that in the vast majority of cases, pæderastia presents itself to the subject as an abomination. That the instinct is morbid he admits, but adds that it is not the less an irresistible impulse, and that the patient has no other way of gratifying the sexual desire. Public opinion and jurisprudence must therefore distinguish, in the first place, between perverted sexual instinct and pæderastia, and secondly, take care not to confound with, and stigmatize as, immorality a morbid natural phenomenon (*Naturerscheinung*) which, in the consciousness of the individual thus organized, is not contrary to, but in conformity with, nature. He reminds us that Ulrichs himself, the champion of the rights of his unfortunate class, argued in like manner when he declared the anomalous condition to be a physiological phenomenon, and described it as a kind of hermaphroditism—the amorous instinct of a nature essentially that of a woman, in the body of a man.²

¹ *Op. cit.*

² *Anima muliebris in corpore virili inclusa.*

THE GROWTH OF THE INTELLECT.*

BY R. M. BUCKE, M. D.,
Superintendent of the Asylum for Insane, London, Ontario.

Whether we look at mankind in the aggregate and consider the race historically, or confine our attention to the development of an individual human being, it becomes equally clear and certain that the capacity of the human mind is not a fixed quantity, but that it has, as a whole, during the countless ages of the existence of the race upon this planet continuously grown, just as also each individual mind, following as it needs must, the course pursued by the general mind, unfolds, expands, and develops from its origin at birth to its culmination in middle or advanced life.

To trace this growth of the general human mind through all the details of its wonderful course (if that were possible) would be not only to follow in their progress from minute beginnings all the sciences, philosophies, arts and religions which man has created, but to add to these a new science and a new philosophy of farther reach and broader scope than any that have ever yet existed. Such an enterprise, even were the data accessible, is probably far beyond the capacity of any individual human mind which this earth has so far produced. It is not however difficult to see that such a development as that spoken of has actually taken place and to indicate in general terms its course and nature.

The task I have undertaken to-day is to treat in outline not the development of the whole mind but that

* Read at the annual meeting of the Association of Superintendents of American Institutions for the Insane, held at Cincinnati, May 30 and 31, and June 1 and 2, 1882.

part of it which we call the intellect; and in my endeavor to fulfill it, I beg that you will have patience with me if I occupy a considerable portion of the time you grant me telling you things that you know already; and especially I wish all those who may be disposed to listen critically to what I am about to say to bear in mind that I shall speak broadly and generally, omitting all details and exceptions but those which must be included in order to convey the fundamental idea which is the basis of my thesis; to include details and exceptions other than these would only confuse my argument without serving any useful purpose.

The whole mind (excluding the senses) consists of two main divisions which are, in their development as well as in their essential nature and physical bases radically disparate and distinct the one from the other. These two divisions are: first, the intellect, and second, the moral nature.

The intellect is that part of the mind which knows; the moral nature is the part that feels. Each particular act of the intellect is instantaneous; whereas the acts of the moral nature are continuous. Language corresponds to the intellect and is therefore capable of expressing it perfectly and directly; on the other hand the functions of the moral nature are not connected with speech and can only be expressed indirectly and imperfectly. Intellectual acts and states are complex and decomposable into many parts; moral states are either absolutely simple—as in the case of love, fear, hate—or nearly so, that is, are composed of comparatively few elements. All intellectual acts and states are alike, or nearly alike as regards their intensity; moral states have a very wide range of degree of intensity. Intellect is synonymous with thought; the moral nature with emotion.

The intellect to which alone I propose to direct your attention to-day is made up of concepts, just as a forest is made up of trees, or a city of houses; it consists of concepts and nothing but concepts; these are simple mental images of things, of acts, of relations. The registration of these we call memory, the comparison of them one with another reasoning; for the building of them up into more compound images we have in English no good expression, we sometimes call this act imagination,—the Germans have a better name for it, they call it *Vorstellung*.

The large intellect is that which consists of a great number of concepts; the fine intellect is that in which these are clear-cut and well defined; the ready intellect is that in which they are easily and quickly accessible when wanted, and so on.

The growth of the intellect is nothing more or less than the growth of concepts.

Now although this growth is taking place constantly in every active mind during at least the first half of life, from infancy to middle age, and though we each know that we have concepts now that we had not some years ago, yet it would be probably more than the wisest of us could do to tell by observation made upon his own mind just by what process these concepts come into existence, or to say where they come from or how they come. But though we can not perceive this by direct observation either of our own or another person's mind, still it seems to me that there is another way by which this occult process can be followed, and that is by means of language.

As remarked already, language is the direct expression of the intellect: for every concept there is a word or words, and for every word there is a concept. As Trench says: "You can not impart to any man more

than the words, which he understands, either now contain, or can be made intelligibly to him to contain." Or as Max Müller says, using still more radical language, "Without speech no reason, without reason no speech." Speech and the intellect do not correspond with one another in this way by accident, the relation between them is inevitably involved in the nature of the two things. No word can come into being except as the expression of a concept, and it is doubtful if any given concept can exist until its correlative expression in language is found. Intellect and speech fit one another as the hand and the glove, only far more closely; say rather they fit as the skin fits the body, or as the pia mater fits the brain, or as any given species in the organic world is fitted by its environment. As is implied in what has been already said, it is to be especially noted that not only does language fit the intellect in the sense of covering it in every part, and following all its turnings and windings, but it fits it also in the sense of not going beyond it. Words correspond with concepts and with concepts only, so that we can not express directly with them either sense-impressions or emotions, but are forced always to convey these by expressing not themselves, but the impression they make upon our intellect, i. e., their intellectual image. In other words, before a sense-impression or an emotion can be conveyed in language, a concept has to be formed of it, which concept can, of course, be conveyed in words; but as a matter of fact ninety-nine out of every hundred of our sense-impressions and emotions have never been represented in the intellect by concepts, and therefore remain inexpressible, except imperfectly by round about description and suggestion.

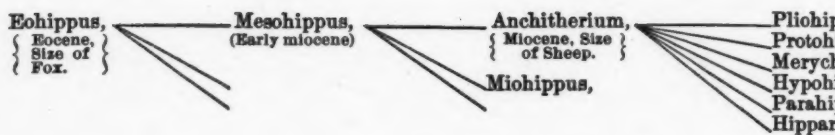
We see in the lower animals a state of things that serves well to illustrate this proposition; they have acute sense-perceptions and strong emotions such as fear, rage, sexual passion and maternal love. There is no doubt that they are fully though perhaps dimly conscious of these, yet they can not express them because they have no system of concepts with corresponding articulate sounds. Granted to us our sense-perceptions and emotions, we should be as dumb as they are were it not that our intellect forms a mirror in which these may be reflected, and from which their images can be thrown, by means of language upon the outer world.

Now as this correspondence of words and concepts is not casual or temporary but resides in their nature and continues during all time and under all circumstances absolutely constant, so changes in one of them must correspond with changes in the other. What I propose then is to examine the growth of the intellect through language, that is to study the birth life and growth of concepts which can not be seen by means of words which are their correlatives and which can be seen.

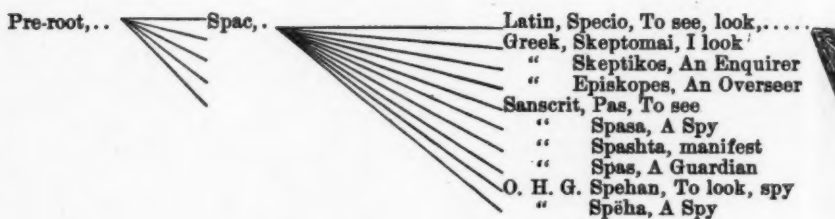
Some years ago Sir Charles Lyell in his work on the antiquity of man pointed out the parallelism which exists between the origin, growth, decline and death of languages and of species in the organic world. To illustrate the point which I wish to bring before your notice, I propose to extend the parallel to words and concepts. [See Tables I and II.]

You see at a glance how wonderfully exact the parallel is to which I have drawn your attention, that, between the evolution of species and languages, not being more so than is the parallel between either of these and the unfolding of one word from another in the

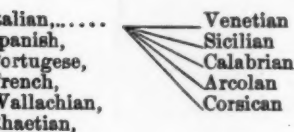
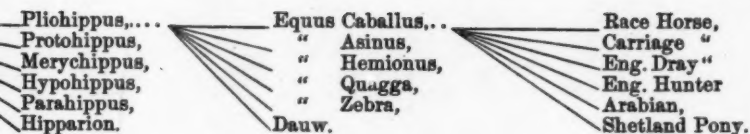
TABLE



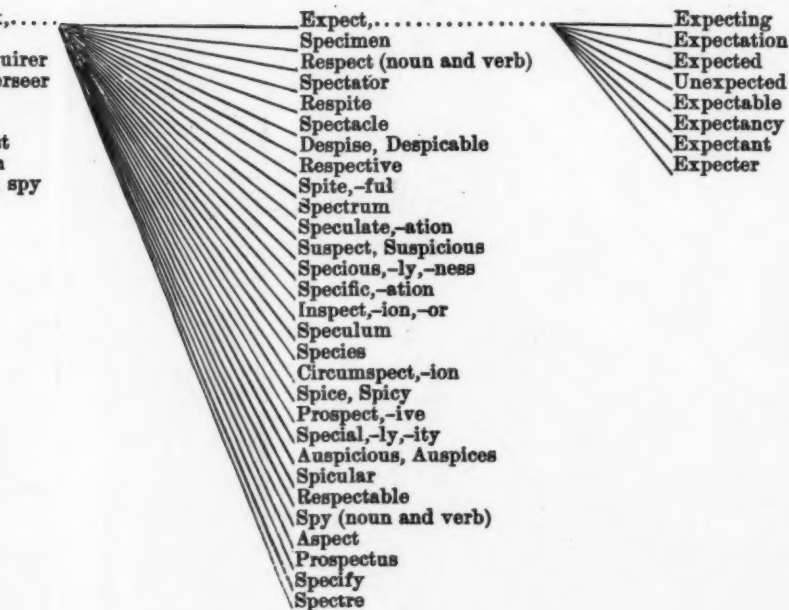
TABLE



BLE I.



LE II.



growth of a single language; and this again, as explained above, being necessarily still more precisely typical of the evolution of concepts, since (as we shall see more fully as we proceed) these two last are not two phenomena, but rather two aspects of a single phenomenon.

The conclusion which I draw from this comparison is that the constituent elements of the intellect, which we call concepts, grow by division and branching as new species branch off from older ones, and I conceive that a normal growth is encouraged and an excessive and useless development checked by the same means in the one case as in the other—that is, by natural selection and the struggle for existence.

By natural selection new concepts, and words expressing them, which correspond with some external reality (whether this is a thing, an act, a state, or a relation), and which are therefore of use to mankind since their existence places him in more complete relation with the outer world, on which relation his life and happiness depend,—such concepts, being useful, are preserved by the process of natural selection. Some again which either do not correspond at all, or only imperfectly, with an objective reality are replaced by others which correspond better with the reality which they aimed at expressing, and so in the struggle for existence they are gradually disused and die out.

For it is with words as with every other living thing, thousands are produced for one that lives. Toward whatever subject the mind is especially turned, it throws out words often with marvelous profusion. Thus five or six thousand years ago, when Sanscrit was still a living language, and while fire was still looked upon as being either an actual God, or at least as being especially sacred, men's minds being greatly occupied with its various properties and aspects, instead

of having a few names as it has in any modern language, such as fire, flame, blaze, &c., it had some hundreds of names. So Max Müller says:

We can hardly form an idea of the boundless resources of dialects. When literary languages have stereotyped one general term, their dialects will supply fifty, though each with its special shade of meaning. If new combinations of thoughts are evolved in the progress of society, dialects will readily supply the required names from the store of their so-called superfluous words. There are not only local and provincial but also class dialects. There is a dialect of shepherds, of sportsmen, of soldiers, of farmers. I suppose there are few persons here present who could tell the exact meaning of a horse's poll, crest, withers, dock, hamstring, cannon, pastern, coronet, arm, jowl, and muzzle. Where the literary language speaks of the young of all sorts of animals, farmers, shepherds, and sportsmen would be ashamed to use so general a term. The idiom of nomads as Grimm says, contains an abundant wealth of manifold expressions for sword and weapons, and for the different stages in the life of cattle. In a more highly cultivated language these expressions become burthensome and superfluous. But in a peasant's mouth the bearing, calving, falling and killing of almost every animal has its own peculiar term, as the sportsman delights in calling the gait and members of game by different names. Thus, Dame Juliana Berners, lady prioress of the nunnery of Sopwell in the 15th century, the reputed author of the "Book of St. Albans," informs us that we must not use names of multitudes promiscuously, but we are to say: A congregcyon of people, a hoost of men, a felyshyppynge of women, and a bevy of ladyes, we must speak of a herde hartys, swannys, cranys, or wrennys, a sege of herons or bytourys, a muster of peacockys, a wathe of nyghtyngalys, a flyghte of doves, a claterynge of choughes, a pryde of lyons, a slewthe of beerys, a gagle of geys, a skulke of foxes, a sculle of frerys, a pontyfycalyte of prelates, a bomynable syght of monkes, a dronkenshypp of coblers, and so on of other human and brute assemblages. In like manner in dividing game for the table the animals were not carved, but a dere was broken, a gose reryd, a chekyn frusshed, a cony unlacyd, a crane dysplayed, a curlewe unjointyd, a quayle wynggyd, a swanne lyfte, a lambe sholderyd, a heron dysmembryd, a pecocke dysfygured, a samon chynynd, a hadoke sydyd, a sole loynynd, and a breme splayed.

These quotations will serve to show how the human mind feels along the face of the outer world that is presented to it, attempting a lodgment in each cranny it finds, however slight and precarious may be the hold that it gets. For the mind of man is from age to age testing itself by the facts of the outer world; its growth indeed consists in tallying or covering these as ivy spreads over the stones of a wall; the twig that secures a hold strengthens and puts out other twigs, that which does not secure a hold after a time ceases to grow and eventually dies.

But the main thing to notice for our present purpose is that just as in the case of the child learning to talk the race also began with a few words (or as Geiger argues in his "*Ursprung der Sprache*," with a single word), that is to say, men began to think with only a very few concepts, or with a single concept, and from those few, or that one, the enormous number of concepts and words now current have proceeded. Nor will this (supposed) evolution of the entire intellect, even from a single initial concept seem incredible or even very marvelous, to those who bear in mind that the whole complex human body, with all its parts, organs and tissues, is built up of hundreds of millions of cells, each one of which, however much it may differ in structure and function from those belonging to other organs and tissues than its own, is yet lineally descended from the one single primordial cell in which each one of us had his origin. If this comparison is well founded, it follows, as it also does, I think, from a direct study of the facts, that as we look back into the past the words and concepts in use become more and more vague, and general, and less and less definite. Thus going back only such a very short distance as to the time when Latin was a living language, during

which brief time only a very slight difference can have taken place in the structure of the intellect, we find one word (*specio*) the concept corresponding to which includes the notions of seeing and looking, and covers by its breadth and generality a number of modern concepts, each with its corresponding word. If we go back behind "*specio*" and all words of its own time related to it we find that they all converge in the dim distance in one word "*spac*." Now this "*spac*" was in its time a live word in every-day use, just as its descendant "*spectacle*," for instance, is at present; but what did it mean? There is no doubt that it covered a concept now long dead and gone, so broad, general and vague, that it would be utterly impossible for us now to receive it in consciousness, since the human intellect has so changed in that time, that just as those distant people could not if these had been presented to them, have thought our highly specialized thoughts, so we could no more think their more broad and general thoughts.

But if language began with one or a few words, that is, if (as seems to me almost certain) intellect began with one or a very few concepts, then we must suppose that at the time "*spac*" was a live word, it had other words related to it by common descent from some still more ancient word. This pre-root, as we may call it, from which "*spac*" and its congeners, in their turn descended, had of course in its turn a concept corresponding to it which would be necessarily still more broad and general than that which corresponded to "*spac*," and of course still more unthinkable by us.

Just as men in remote ages, having none but what we should now consider vague and general concepts, necessarily used, to express them, vague and general words, so backward minds at the present day with a highly specialized language at their hand use it almost

as if it was composed of such words as "spac;" thus young children make a vocabulary of a few dozen words answer all their needs by using one word for a great number of different things, each one of which however is the same thing to him (thus I know a young child who calls every person it sees "man," not recognizing evidently that the persons differ one from the other, or even that they are multiple, but taking each one to be the same person). Grown up people of low intelligence do the same thing, though never perhaps to the same degree; they make a small vocabulary go a long way by using one word where an educated person would use half a dozen or more. An excellent example of this is afforded by the use made of the verb "to tote" by the lowest class of people, both white and black, of the Southern States. This word "tote" takes the place with them of at least four of the words in our vocabulary, it means to carry, to lead, to guide and to drive. A man will say to another, "Here, you, tote this wood to the house," or, "Say, boy, tote this horse to water," or "Say, you Sam, tote this stranger to Mr. Jackson's," or "Here you boy, go right away and tote the cows home." Now in using this one word for those four distinct words, it does not cover in their minds four distinct concepts; on the contrary, it covers only one, but that one is so broad and vague that it covers the ground occupied in one of our minds by the four. If the four concepts "carry," "lead," "drive" and "guide" had each a separate existence in their mind, nothing is more certain than that they would use a separate word for each, especially as distinct words exist ready for use.

I may say here that to suppose the intellect to have been developed in the manner for which I am contending, it is of course necessary to grant that man has

which brief time only a very slight difference can have taken place in the structure of the intellect, we find one word (*specio*) the concept corresponding to which includes the notions of seeing and looking, and covers by its breadth and generality a number of modern concepts, each with its corresponding word. If we go back behind "*specio*" and all words of its own time related to it we find that they all converge in the dim distance in one word "*spac*." Now this "*spac*" was in its time a live word in every-day use, just as its descendant "*spectacle*," for instance, is at present; but what did it mean? There is no doubt that it covered a concept now long dead and gone, so broad, general and vague, that it would be utterly impossible for us now to receive it in consciousness, since the human intellect has so changed in that time, that just as those distant people could not if these had been presented to them, have thought our highly specialized thoughts, so we could no more think their more broad and general thoughts.

But if language began with one or a few words, that is, if (as seems to me almost certain) intellect began with one or a very few concepts, then we must suppose that at the time "*spac*" was a live word, it had other words related to it by common descent from some still more ancient word. This pre-root, as we may call it, from which "*spac*" and its congeners, in their turn descended, had of course in its turn a concept corresponding to it which would be necessarily still more broad and general than that which corresponded to "*spac*," and of course still more unthinkable by us.

Just as men in remote ages, having none but what we should now consider vague and general concepts, necessarily used, to express them, vague and general words, so backward minds at the present day with a highly specialized language at their hand use it almost

as if it was composed of such words as "spac;" thus young children make a vocabulary of a few dozen words answer all their needs by using one word for a great number of different things, each one of which however is the same thing to him (thus I know a young child who calls every person it sees "man," not recognizing evidently that the persons differ one from the other, or even that they are multiple, but taking each one to be the same person). Grown up people of low intelligence do the same thing, though never perhaps to the same degree; they make a small vocabulary go a long way by using one word where an educated person would use half a dozen or more. An excellent example of this is afforded by the use made of the verb "to tote" by the lowest class of people, both white and black, of the Southern States. This word "tote" takes the place with them of at least four of the words in our vocabulary, it means to carry, to lead, to guide and to drive. A man will say to another, "Here, you, tote this wood to the house," or, "Say, boy, tote this horse to water," or "Say, you Sam, tote this stranger to Mr. Jackson's," or "Here you boy, go right away and tote the cows home." Now in using this one word for those four distinct words, it does not cover in their minds four distinct concepts; on the contrary, it covers only one, but that one is so broad and vague that it covers the ground occupied in one of our minds by the four. If the four concepts "carry," "lead," "drive" and "guide" had each a separate existence in their mind, nothing is more certain than that they would use a separate word for each, especially as distinct words exist ready for use.

I may say here that to suppose the intellect to have been developed in the manner for which I am contending, it is of course necessary to grant that man has

existed as man, that is as an animal that thinks and speaks, for a much longer time than is usually thought; and this necessary element in my argument is not wanting, for present indications point to the probability that it will soon be demonstrated that man has not lived on the earth less than some four hundred thousand years, and perhaps for a much longer time even than this; such a period would probably be sufficient for the evolution supposed.

Those of you who have not given some attention to this subject may be inclined to think just at first (and I should not much blame you if you did), that it is all very well as a speculation, but that it is up in the clouds and does not admit of verification. Well, perhaps it does not admit of proof in the same sense that a Theorem in mathematics does, but for all that there is evidence of its truth, both direct and indirect, well calculated to impress those who will take the pains to consider it.

It is well known that the higher animals, including man, in the course of their intra-uterine development, in a general way pass through phases of existence proper to the various classes of animals below them in the organic world, and that this is depended upon (and rightly so as it seems to me) as one evidence of the evolution of higher from lower forms of life. Just in the same way is the evolution of the individual mind an abbreviated repetition or summary of the development of the general mind, and what is true in the case of one of these is, beyond all doubt, true (at least in a general sense) in the case of the other.

Now it is true that although we (many of us) live among children a large part of our lives, we can only tell in a very general way, by direct observation, what their mental operations are like, and I believe the main

reason of this is that their thoughts are so different from ours that we can not think them; that is to say we can not put ourselves in their place and see (mentally) with their eyes; that in fact the child's intellect (as we know is true in the case of its moral nature) corresponds very closely with the primitive human mind, the general character of which I tried a moment ago to suggest to you. For what do we see in fact? The young child first of all acquires sensations (just as in ascending from the lower animal forms to the higher we meet sensation before we meet either emotion or intellect), and by the time it is three or four months old, it probably has vague elementary emotions, but it is somewhat older than this before it has a single concept (that is a mental image of which it is conscious). Then at the age of perhaps six, eight, or ten months, (for children vary a good deal in this respect) it begins to think, and, either at the same time or immediately afterwards, to speak. For many weeks its whole vocabulary consists of a word, which is probably "ma," and I believe that at this time its whole intellect is composed of one, or, at most, of two or three concepts, at all events every one must admit that their number must be very limited. It would be as impossible for a grown man to think that child's thought or thoughts as for the child to think those of the man. The child's vocabulary extends month by month and year by year, and at the same time its mental images multiply and become less and less vague and general, and more and more special and definite. Now, from having one or half a dozen concepts, how does the child come to have a large number? That is, by what mode are they multiplied? Do the new concepts spring up alongside of and independently of the old, or do they spring from those already formed, as new branches of a tree spring from older

ones, as new species in the organic world spring from prior species, as new languages spring from an older one, and as new words spring from their antecedent so-called "roots"? It seems to me that analogy as well as all the evidence is overwhelmingly in favor of this last view. For instance, to the young child when just awakening to consciousness there exists no such thing as different persons, each person who takes it up or attracts its attention is the same person over again, and as its knowledge of any person whatever is confined to one fact, the capability, namely, of affording food, the child, if it happens to be hungry, shows by its actions its desire to be suckled by whoever takes it up. The child then begins its knowledge of humanity with one very broad and very vague concept. As the child learns to know individuals it is manifest that the different concepts which stand for these are offshoots of the general concept under which at first every one indifferently was comprehended. So, were sufficient time given to the task it could be shown that an adult's knowledge of humanity, including all persons, organs, acts and attributes which come within his or her cognizance is an outgrowth from, or an unfolding of, that one primordial concept.

As illustrating and confirming what I have said, I wish as briefly as possible to point out that apparently the evolution of function of the sense organs corresponds very closely with the scheme of development which I have attempted to show is proper to the intellect. Thus the eminent philologist Geiger points out in his work "*Zur Entwicklung der Menschheit*," that it can be proved by the examination of language that as late in the life of man as the period of the formation of the original Aryan language, perhaps not more than fifteen or twenty thousand years ago, man

was only conscious of one color; that is to say that he did not distinguish any difference in tint between the blue sky, the green trees and grass, the brown or grey earth and rocks, and the golden and purple clouds of sunrise and sunset; that at a later period, but still before the time of the oldest literary composition now extant, the color sense was so far developed beyond this primitive condition that red and black were recognized as distinct; still later when the bulk of the Rig Veda was composed, red, yellow and black were recognized as three separate shades, but these three included all color that man was at that age capable of appreciating; still later white was added to the list, and then green; but throughout the Rig Veda, the Zend Avesta, the Homeric Poems and the Bible, the color blue is not once mentioned. This omission can hardly be attributed to accident, for the 10,000 lines of the Rig Veda are largely occupied with descriptions of the sky; and all its features—sun, moon, stars, clouds, lightning, sunrise and sunset are mentioned hundreds of times. So also the Zend Avesta, to the writer of which light and fire both terrestrial and heavenly are sacred objects, could hardly have omitted by chance all mention of the blue sky. In the Bible the sky and heaven are mentioned over four hundred and thirty times, and still no mention is made of the color of the former. In no part of the world is the blue of the sky more intense than in Greece and Asia Minor where the Homeric Poems were composed—is it possible to conceive that a poet who saw this as we see it now, could write the forty-eight long books of the Iliad and Odyssey and never mention it once? But if we could believe that all the poets of the Rig Veda, Zend Avesta, Iliad, Odyssey and Bible could have omitted the mention of this color by mere accident, etymology

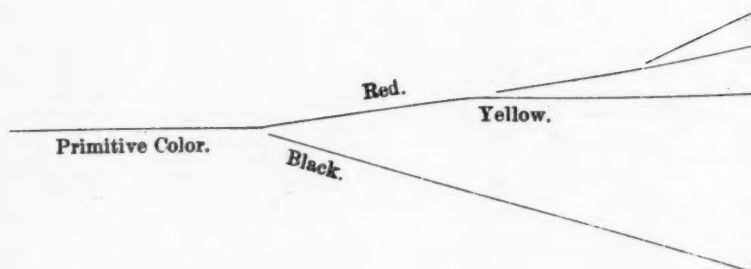
would step in and assure us that blue was unknown at the time of which we are now speaking, for at that time the subsequent names for blue were all merged in the name for black. Blue itself and the German blau, descend from black—the Chinese hi-u-an, which now means sky-blue, formerly meant black. The word “nil” which now in Persian and Arabic means blue is derived from the name of the “Nile” or the “black river,” of which word the Latin “niger” is a form.

It seems to me impossible that, at the time when men recognized only two colors which they called red and black, these appeared to them as red and black appear to us,—though just what the sensations were which they so named can not of course be now ascertained. Under the name of red it seems they included with that color, white, yellow, and all intermediate tints; under the name black—blue and green (or did they see red as red and every other shade as colorless or black.) As the sensations red and black (so-called) came into existence by the division of an original unital color sensation, so in process of time these divided. First, red divided into red-yellow; then that red into red-white. Black-divided into black-green; then black again into black-blue; and during the last twenty-five hundred years thesesix (orrather the four, red, yellow, green and blue) have split up into the enormous number of shades of color which are now recognized and named.

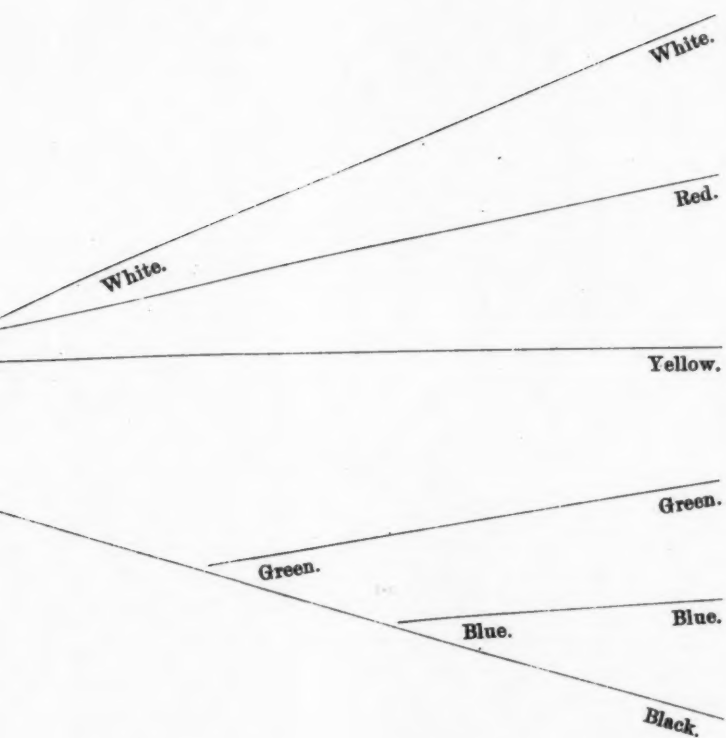
[See Table III.]

It can be shown in an entirely independent manner that if the color sense did come into existence as here supposed, the order in which the colors were recognized was really such as has been drawn from the study of ancient documents and of etymology, and the scientific facts that I am now about to mention must be admit-

TABLE



LE III.



s
v
a
c
t
s
t

t
d
t
a
P

ted to be remarkably confirmatory of the conclusions drawn from sources entirely independent of them. The solar or other, rays that excite vision are as follows: Red, orange, yellow, green, blue, indigo and violet. Now these rays differ the one from the other in the length and amplitude of the waves which compose them, and both their length and amplitude diminish in the order in which I have given the colors; but the force or energy of any wave, that is to say its power of exciting vision is proportional to the square of its amplitude. According to this law the energy of the red rays is several thousand times as great as the energy of the violet, and there is a regular and rapid decrease of energy as we pass down the spectrum from red to violet. You will see at once that if there was such a thing as a growing perfection in the sense of vision, by which from being insensible to color the eye became gradually sensible to it, red would necessarily be first perceived, then yellow, then green, and lastly the different shades of blue; and this is exactly what both ancient literature and etymology tell us took place.

Then further the modernness of this color-sense is attested by the large number of people in all countries who are what is called color-blind; that is, people who are at the present day either entirely or partially without color-sense. (It is important to notice that only the centre of the retina, called the "yellow-spot," is sensitive to color, though its whole surface is sensitive to light, shade, form and distance).

In color-blindness the general vision is not affected; the person distinguishes light and shade, form and distance as well as other persons; this goes to show that the color-sense is more superficial, less fundamental, and probably therefore acquired later than the other parts of the function of sight; for a person could not

lose one of the more fundamental elements of vision (the sense of visual form for instance), and retain the other parts of sight unimpaired.

Color-blindness is in fact an instance of what is called atavism, or relapse into a condition which was normal in the ancestry of the individual, but which does not properly belong to the species in the time in which he lives. The frequency of this relapse (estimated to occur in England in one person out of sixty) indicates that the color-sense is comparatively modern; for atavism is more frequent in proportion as the organ or function either lost or improperly taken on (as the case may be), is less remote as a normal condition in the species; and less frequent in proportion to the remoteness of the time when the condition relapsed to was the normal condition of the race. The reason for this is obvious; it is simply that the longer any organ or function is in existence in a race, the more certainly it is inherited.

The phenomenon of color-blindness therefore tends to show that the color-sense is modern; the comparison of the different colored light rays show that if the colored-sense was acquired, it would certainly have been acquired in the order claimed from etymological considerations; and the concurrence of these two sets of facts drawn from natural science, with the deductions from etymology and from the examination of the most ancient books, is so striking that we can hardly refuse assent to the conclusions reached.

A parallel case to that of the development of color-sense is that of the evolution of the sense of fragrance and bad odors. In the Vedic hymns no such thing as fragrance is mentioned; it is spoken of once only in the Zend Avesta. Geiger says:

The custom of offering incense with the sacrifice is not yet met with in the Rig-Veda, though it is found in the more recent Yashurveda. Among the biblical books the sense of the fragrance of flowers first makes its appearance in the "Song of Songs." According to the description in Genesis there were in Paradise all kinds of trees "that were pleasant to the sight and good for food." The Apocryphal book of Henoch (of the last century, B. C., or even later), extant in Ethopian, likewise describes Paradise, but does not omit to extol the delightful fragrance of the Tree of Knowledge as well as of other trees in the Garden of Eden.

Besides these evidences it is said to be capable of proof from language that no such sense as that of fragrance existed in the early times of the Indo-Europeans. And it is also worth mentioning in this connection that no animal (although many of these so greatly surpass us in recognition by scent), possesses, as far as we know or can discover, any sense of fragrance, and that children do not acquire it until they are several years old—not indeed for several years after they have acquired, more or less perfectly, the sense of color; thus corresponding in their mental development (as we pointed out once before) with the evolution of the general human mind, for the color-sense came into existence in the race many hundred years before the sense of fragrance.

If time permitted facts connected with the unfolding of the other senses, hearing, taste and feeling, might be adduced corresponding with those given in regard to sight and smell; but this would be entirely unnecessary, since the proposition which I set out to establish—that the intellect grows by successive cleavage or fissure of concepts—has been, I think, sufficiently illustrated.

Before closing I wish to refer very briefly to a corollary from the preceding argument—it is this: The process indicated, that is (in Herbert Spencer's language),

the process of evolution by successive differentiations and integrations, as it has had, as far as we can see no beginning (for it is seen in the making of systems and worlds, and governs all changes in the inorganic as well as in the organic kingdom), as I say, it has had no beginning, so it can have no end. Cleavage of concepts and sense-perceptions will go on in the future as it has gone on in the past. Being involved in an infinite series of changes we are always in the middle of our course—as any given spot is the centre of infinite space. Our present concepts will divide and the new ones again divide, giving rise to finer and clearer mental perception, until our present thoughts will seem as coarse and crude to our remote descendants, as do those of an infant or savage to us.

By successive alterations, such as those indicated in our intellect and sensations, along with analogous but far more important changes in our moral nature, of which I have treated at large elsewhere, is being constructed, and shall at last be built up, that “new heaven and new earth” foreseen by John in his Apocalyptic vision. A vision which may be seen with as great certainty and clearness by the true scientist as by the inspired seer.

For the world itself is perfect and has been from the beginning; its sky was as blue, its flowers as fragrant, and their tints as exquisite, thousands of years ago, when men had no faculties to perceive these qualities, as they are to-day; and it still contains invisible splendors and beauties more divine than any yet revealed to our sense, which wait for the coming man who shall have faculties to see and feel them.

I swear the Earth shall surely be complete to him or her who shall be complete;

I swear the Earth remains jagged and broken only to him or her who remains jagged and broken.

CLINICAL NOTES.

A CASE OF CEREBRAL HYPERÆMIA WITH DELIRIUM FOLLOWING SUDDEN CHANGE OF TEMPERATURE.

REPORTED BY EDWARD N. BRUSH, M. D.,
Assistant Physician New York State Lunatic Asylum.

The following case illustrates, in a marked degree, the profound cerebral and psychical disturbance which may arise from sudden changes in temperature:

Chas. B——, a strong, healthy man, twenty-three years of age, of temperate habits, and by occupation a butcher, was brought to the New York State Lunatic Asylum at 5 P. M., February 2, 1880. From his physicians and friends the following history was obtained: The patient arose feeling as well as usual, and after a light breakfast went to the slaughter-house, where he was actively engaged for a short time cutting up and packing meat. From this occupation, and while warm, he drove two miles on business and returned. The outside temperature at this time was 20° below zero, Fahr., and the patient was thinly clad. He returned a little after eleven in the morning. Shortly after entering the house he complained of being chilly and stiff. These sensations increased, accompanied by headache and vertigo, and soon he became incoherent and noisy, and shortly afterward so violent that it required three persons to hold him. Dr. Clark was summoned, who administered ether and kept the patient under its influence for three hours. As soon as the anæsthetic was withdrawn, he became as violent as ever, and threw himself about the bed as from muscular spasm. There was some tendency to opisthotonos. Dr. Gray was sent for, and on consultation a covered sleigh was sent

for, a mattress put in, and the patient, enveloped in blankets, was taken at once to the asylum.

He was with difficulty controlled by four men who had him in charge. He struggled violently, but without apparent object, and at times he yelled noisily, at others groaned as if in pain. Occasionally when his arms were free he struck at some object.

His pupils were contracted and did not respond to changes of light. His face was flushed and hot, temporal veins full to distention. Pulse 142, full and bounding. Extremities cold and pale.

Enveloped in a large woolen blanket to control his limbs, he was immediately placed in a warm bath and at the same time cold applications made to the head. In ten minutes a copious perspiration covered his face and neck, his pupils were dilating, pulse 128. In twenty minutes more his pulse was 120, the pupils were responsive to light, he struggled much less and made attempts to talk. He was then, having been in the bath half an hour, wrapped in a warm, dry blanket, placed in bed and given a hot whisky punch. He was still in a semi-conscious state, rolled restlessly from side to side, and muttered incoherently. One hour after admission forty grains of bromide of potassium were given. His pulse fell to 112, his whole body was warm and perspiring freely, face still flushed, pupils small. At 10 P. M., five hours after admission, the pulse was 104 and pupils normal. He had now so far regained consciousness that he understood and answered questions, but was still confused and complained of intense headache. He was given thirty grains of bromide of potassium, and had an ice bag applied to the head. At midnight, the headache still continuing, he was given thirty minims of fluid extract of ergot, and in a short time went to sleep. During the night he was, at times, restless, and occasionally talked in sleep.

By 9 A. M., his pulse was 88, temperature normal, and consciousness had been fully restored. Convalescence proceeded without interruption, and in three days the patient left, well.

Otto Schwartz (*Die Transitorische Tobsucht*, p. 23,) mentions among the causes of transitory mania, sudden change of temperature or long exposure to excessive heat, and says that sudden change from cold into overheated localities frequently produces cerebral congestion. Among the cases mentioned in his book he cites the following:

CASE VIII. Samuel W——, forty years of age, a merchant, married, on a very cold day entered the Exchange where from the presence of a crowd and from overheating a high temperature prevailed. W—— is a heavy, full-blooded man. After about a quarter of an hour he began to complain of headache and disturbances of vision and to feel very uneasy. In spite, however, of these he remained at the Exchange to settle some business of an important nature with a fellow merchant. On his arrival an animated discussion arose between them in which others participated. The patient W——, generally of an excitable and violent temper, and more excited by his illness, grievously insulted his colleague, which the latter answered by knocking him down. As a number of gentlemen who witnessed the scene took part against W——, he left the Exchange in great indignation and, crossing the street, a distance of about five hundred paces, entered a small restaurant where also a high temperature prevailed. Immediately after entering the low, dark room, full of tobacco-smoke and bad odors, in trying to take a chair he fell to the floor and remained there in an apparently unconscious condition. Those present believing that he had an apoplectic seizure at once hastened to his assistance, but as soon as he was lifted from the floor he violently attacked those about him, breaking at the same time into semi-coherent interjections, as: kill the wretch; miserable thieves; robbers, etc. He was secured with great difficulty after having injured a number of by-standers. Mechanical restraint was applied and he was taken home and placed in charge of a physician.

The paroxysm of extreme violence continued until three P. M., when he became more quiet and fell into a disturbed sleep. In two hours he awoke in extreme maniacal excitement, which lasted until midnight, and was followed by a short period of sleep. From this sleep, which was disturbed and restless, he awoke in a state of apathy, which was followed by another period of violence succeeded by quiet. These alternating periods continued until the evening of the second day, when after a longer period of quiet, he passed into a deep sleep and awoke at the end of eight hours fully conscious. His recollection only extended to the moment when he entered the restaurant, beyond that he was wholly unconscious of all that had happened. The whole attack including the terminal (critical) sleep lasted forty-four hours.

Dr. Reich, in the *Berliner Klinische Wochenschrift*, No. 8, 1881, reports the cases of four children who were exposed for some time in a sledge to a temperature of from three to eight degrees below zero, F., who being taken into a warm room showed marked delirium, lasting several hours, characterized by violence and hallucinations. After a long sleep this condition passed off, leaving no recollection of the mental disturbance. Reich considers that the sudden change from cold to heat was the cause of a disturbance of balance between the circulation of the inner parts of the body and the external, to which the circulation of the brain was especially subjected.

As early as 1865 Krafft-Ebing in his monograph upon the subject mentions exposure to extremes of temperature as causing transitory mania, and in his *Lehrbuch der Psychiatrie*, Bd. III. pg. 42, he relates two cases of transitory mania caused by caloric influences.

SOME PECULIAR EFFECTS OF CINCHONIA.*

BY JOSEPH G. ROGERS, M. D.,Superintendent of the Indiana Hospital for the Insane, Indianapolis, Indiana.

Without special ambition to claim originality, I wish to call the attention of the Association to certain important, but hitherto unnoted, effects of the alkaloid cinchonia which I deem valuable to the specialty.

This agent has always occupied a modest place in the array of cinchona products, on account especially of its assumed inferiority as a febrifuge to quinia, but it has certain remarkable qualities not possessed by these alkaloids to any considerable extent, which seem to have escaped general observation completely.

Its tasteless quality, when unsalified, led me, some years since, to use it as an antiperiodic among children. Noticing certain peculiar effects, I made a study of its action on my own person. The observations then made I have since repeated many hundred times, during a period of five years, and the effects referred to I have found to be constant. They may be detailed in a few words: An hour after the ingestion of twenty grains, more or less, is made manifest a decided disturbance of the sympathetic system, as shown by cardiac weakness and irregularity, and a general sense of muscular debility with tremor becomes quite marked; nausea is not infrequent. These effects may arise from any of the bark alkaloids, and are not peculiar. At the same time paresis of visual accommodation appears and progresses to such an extent as to be almost complete, in many instances, at the end of the second hour. At this stage

* Read at the annual meeting of the Association of Superintendents of American Institutions for the Insane, held at Cincinnati, May 30 and 31, and June 1 and 2, 1882.

even the emmetropic eye will require the aid of a number ten convex glass to properly distinguish objects at the normal near point. The paresis lasts eight or ten hours. It is not associated with any mydriatic effect in adults, but sometimes this condition is noticeable in children of delicate nervous organization.

With these phenomena are associated, primarily, slight mental excitation, a sense of heat and bloodfulness in the head and upper part of the body, and some flushing of the skin. Later, a relative pallor involves the entire surface, the mucous membrane of the eyes, nose, mouth and throat becomes very dry, and so continues for several hours. At the same time there is very decided obtusion of tactile sensibility. Stimulants, food and rest readily overcome the cardiac and muscular disturbance, but have no influence on the other conditions. The foregoing observations refer to effects upon adults. In young children, within an hour after administration, a most decided erythema suddenly appears, notably about the head, but involving the entire surface. This appearance is exactly as in the third day of scarlet fever, and, just as then, the skin can be legibly written upon with a blunt point. This state of cutaneous vaso-motor paresis is temporary, usually disappearing within two hours, and is followed by a paleness more noticeable than in the adult, which is prolonged for several hours.

The deduction from these observations is that cinchona, in addition to its tonic and antiperiodic effects, exerts special influences on the nervous apparatus cognate to those belonging to the alkaloid of belladonna, hyoscyamus and stramonium, and should be correspondingly useful in those conditions in which this class of agents is indicated.

Practically I have found it eminently serviceable in febrile conditions, associated with cerebro-spinal congestion, and in the more sthenic types of acute mania. The ordinary sedative effects of the bark alkaloids have superadded to them most marked vaso-motor influences which result secondarily and permanently in an increase of tension and consecutive reduction of congestion.

With these suggestions, I delegate to the physiologist further study of the *modus operandi* of this neglected but important agent.

GUITEAUMANIA.

"Was there ever," asked Dr. William A. Hammond, when recently addressing the New York Medico-Legal Society on the case of Guiteau, "was there ever a man whose whole career, from childhood to the present day, has afforded a more striking example of that form of mental derangement called reasoning mania?" and seeing that what Dr. Hammond calls reasoning mania is synonymous with what he might as correctly call arrant roguery, the answer which he anticipates and desires may be given to his question. That Guiteau has been an arrant rogue, or, according to this new self-contradicting euphemism, a reasoning maniac, from his youth up until now, will scarcely be denied by any one who has glanced at the reports of his trial; and we fail, therefore, to perceive the necessity for the elaborate proof which Dr. Hammond adduces in support of this self-evident proposition. It may be well to examine Dr. Hammond's position, and inquire what justification he has for applying the term lunatic to the assassin of President Garfield.

We do not now enter upon the general question whether it is expedient to divide lunatics into two classes, one of which shall be amenable to penal discipline, and the other only to medical treatment, further than to say that to do so would be to run counter to all advances hitherto made in the medical jurisprudence of insanity, and to create difficulties greater than have yet been experienced in the administration of the law. Efforts have therefore been directed to reconcile the legal definition of insanity with the scientific description of it; and the attempt to force these two asunder, to limit the former to a small group of idiots and raving madmen, and to extend the latter so that it shall include half the human race, can only end in inextricable confusion. Putting aside, however, general considerations, let us see what grounds Dr. Hammond has for applying the term lunatic in this particular instance,

and for arguing that Guiteau, although worthy of death, is still the victim of a disorder of the mind and a diseased brain. What, then, are the evidences of Guiteau's insanity which Dr. Hammond, after much probing of his life, and ransacking of the records of his trial, is able to bring forward? They are as follows:

"That he had several insane relatives; that while at college he abandoned his studies and entered the Oneida community; that he left it and subsequently returned; that he again left it and went to New York to establish a newspaper devoted to the dissemination of peculiar religious ideas; that he abandoned this project; that he studied law, and was admitted to the Bar; that he was married, and then divorced through his own procurement; that he became interested in religion, and delivered lectures on the subject; that, while thus engaged, he attempted to strike his sister with an axe; that though a physician could find neither illusion, nor hallucination, nor delusion, he pronounced him insane, 'because of exaltation of the motives, and explosions of emotional feeling, also excessive egotism, and that he was the subject of pseudo-religious feeling,' and advised his confinement in a lunatic asylum; that he soon afterwards gave up lecturing; that he associated himself with the National Republican Committee, and prepared a speech, which, however, he only delivered once; that, after the election of General Garfield, he asked, by letter, for the appointment of Minister to Austria; that he went to Washington to urge his claims; that, not getting the position, he applied for that of Consul at Paris; that he earnestly and persistently followed up his application by verbal and written requests, having no special claims for this place except his own idea of the value of his services, and having the recommendation of but one person; that he unwarrantably inferred from a remark of the Secretary of State that he might be appointed; that, in spite of rebuffs from officials in authority, he continued to expect the appointment; that he made inquiries about a pistol, which he subsequently purchased, borrowing money to pay for it; that he practised with it by

shooting at a mark; that he followed the President on two occasions for the purpose of killing him, but was deterred once because his wife, who was sick, was with him; that, finally, he lay in wait for him at the railway station, and shot at him twice, intending to killing him, and inflicting a mortal wound. That, after the shooting, he attempted to get to the jail for protection; that he was arrested, and that a letter to General Sherman, asking for troops to protect him, was found upon his person; that, in two letters, written several days before the shooting, he declares the President's nomination was an act of God, his removal an act of God; that, in another document, addressed to the American people, and dated as early as June 16, he used this language:

I conceived the idea of removing the President four weeks ago; I conceived the idea myself, and kept it to myself,' and other words of like character. That he subsequently claimed that he was inspired by the Deity to kill the President, and that he had had previous inspirations; that, for years before the shooting, he had procured a precarious living, not paying his board-bills, borrowing money, evading the payment of his railroad fares, retaining money collected by him as a lawyer, and being several times in prison on charges of fraud; and that, on the stand, he stated that he felt remorse for his deed so far as his personal feelings were concerned, but that his duty to the Lord and the American people was paramount."

Now, what does all this amount to but the description of the career of an unscrupulous and sanctimonious adventurer? Are there not thousands of men in the United States and every civilized country whose lives, if carefully reviewed, would present as many mad points as that of Guiteau—mad points which make a specious show when brought together, but which are really of no account when scattered over long tracts of commonplace rational conduct? An English psychological journal argued recently that the late Thomas Carlyle was a lunatic; and the proofs of that thesis which it adduced, such as his depression, hypochondriasis, irritability and misan-

thropy, were quite as good in their way as Dr. Hammond's proofs of Guiteau's insanity. Taking these proofs individually, there is not one of them that bears the stamp of madness; and, taking them collectively, they are incompatible with any theory of mental aberration. Insanity is often regarded as a lawless condition, of which anything and nothing may be equally predicated; for it seems to those who look upon it carelessly from afar to be a wild storm of thought, blowing where it listeth, and without centre or limitations. To those, however, who have studied it more closely and discerningly, there are revealed order in its ravages, and system in its cycles; and to them it becomes possible to say, in many instances, what course it will pursue, what features are characteristic of it, and what conjunctions are never witnessed in it. And skilled students in mental meteorology of this kind, who are free from personal bias and the thralldom of premature judgments in print, will certainly say that Guiteau's case, as described by Dr. Hammond, is not classifiable under any variety of insanity with which they are acquainted. Dr. Hammond has evidently ranged through the medico-psychological literature of many lands in order to obtain precedents and opinions with which to fortify his position; and we may assume, therefore, that his quotations afford the nearest approaches to descriptions of Guiteau's supposed malady that are to be found. Accepting these quotations, for the sake of argument, as fairly depicting genuine and recognized types of insanity—which might well be questioned—to which of them, we would ask, does Dr. Hammond's version of Guiteau's case correspond? To none of them, must be the reply. Were there in Guiteau those blind impulses to the perpetration of acts of violence, or even of sanguinary fury, which Pinel makes the prominent symptom in mania without delirium? Certainly not. Was there in Guiteau that sudden transition from propriety of conduct and goodness of nature to licentiousness and moral degradation which Esquirol makes characteristic of his "reasoning monomania"? It can not be pre-

tended that there was. Did Guiteau exhibit the delusions of persecution which Morel enumerates amongst the active principles of mania of character? There is no evidence that he did. Was there in Guiteau that blind submission to sexual desire, jealousy, ambition, vengeance, which Dagonet insists on as marking out reasoning mania? His history does not sanction such an idea. There is just one description of a form of insanity given by Dr. Hammond, to which Guiteau's case bears a striking resemblance; and that is his own description of reasoning mania, not quoted from his published writings, but prepared for the occasion; and to pronounce Guiteau insane because this description fits him would be very much as if, having seen Arthur Orton, and drawn a portrait of him, and called it Tichborne, we should swear that Orton was Tichborne because he resembled the portrait.

But Dr. Hammond's description of reasoning mania is not in conformity with medico-psychological experience on this side of the Atlantic. Such lunatics are not to be met with in asylums. They are a new discovery in the fauna of insanity in the United States; and we would suggest to Dr. Hammond that, as Guiteau is the most striking specimen of this kind of lunatic that has yet been discovered, he should substitute for the cumbersome and inconsistent name that he has adopted, the unmistakable designation of "Guiteaumania." We should then, with greater facility, be able to discuss with him the symptoms and medico-legal relations of this unique variety of mental alienation, as he would call it, or of moral turpitude, as we should prefer to designate it.

We have said that Guiteaumania is not recognized in Europe as a form of mental disease, either involving irresponsibility or calling for curtailment of liberty, or medical treatment. It may be admitted at once that Guiteau had an ill-balanced and depraved mind; but to this admission it must be added that he was not, in this respect, a whit worse off than three-fourths of the inmates of our convict prisons, who are notably infirm of purpose and inconsequential in thought, but who

are nevertheless treated like accountable beings. The shrewdness and perspicacity which Guiteau displayed in his running accompaniment of interruptions throughout his trial, render it impossible to argue that his intellect is in any degree enfeebled. His power of apprehension and of foreseeing the drift of any questions asked, was incontestably proved on innumerable occasions to be unusually acute; his memory was repeatedly shown to be tenacious and serviceable; and his judgment, when applied to the actions and motives of others, was often exhibited in a favorable light as regards its clearness and penetration. The anxiety which Guiteau displayed about his personal safety, and the precautions he took to secure it, are sufficient evidence that he is amenable to ordinary human motives; and the self-restraint which he more than once exercised when it suited his purpose to do so, betokened the possession of ample volitional power at his command. His crime was not a reckless and motiveless one, nor can it be said that it was prompted by any delusive belief. Of course, but few crimes have one sufficient motive; most are the resultants of several convergent mental forces; and so in Guiteau's case it may be impossible to put one's fingers on any single spring of action, and say this impelled the fatal bullet; but still it may be safely averred that, in his itch for notoriety, his disappointments, his miscalculations, there is enough to account for his guilty performance without resorting to any theory of insanity in explanation of it.

The bodily or physical symptoms or accompaniments of insanity are obviously of the highest diagnostic value in doubtful cases, for they can not be assumed at pleasure, and often supply the key to intricate and obscure mental phenomena. Dr. Hammond does not assert that there has been observed in Guiteau any bodily indication of disease of the brain or nervous system; but he quotes from Campagne's *Traité de la Maine Raisonnante* a list of the peculiarities of cranial configuration, which are supposed to be characteristic of this disorder; and he leaves it to be inferred that Guiteau conforms in these as in other respects to his

delineation of reasoning mania. The cranial peculiarities which Campagne enumerates, and which are set forth with affected precision, amount in substance to this: that reasoning maniacs have heads smaller than those of sane persons and other kinds of lunatics, larger than those of idiots, about the same size with those of imbeciles, and presenting an antero-posterior curve less than that of sane persons, lunatics and imbeciles, and even of idiots. They labor, we are dogmatically informed, under a congenital atrophy of the posterior lobes of the brain, the skull having been diminished in size, to the detriment of the occipital region. But could any one, we would ask, stand up with gravity in the presence of men scientifically acquainted with cranial morphology—men like Professors Flower and Turner, and Mr. Parker—and allege that there is anything distinctive in the cranial characteristics of moral maniacs which are thus put forward? Before attaching the slightest importance to Campagne's statements, we should require to have full and authentic histories of the cases in which his measurements were made, a description of his methods of observation, and all his tables of figures. And even on finding, after these conditions had been fulfilled, that his conclusions were justified, we should tell him that all he had succeeded in proving is that wicked and weak-minded people have, on the average, smaller heads than those who are more virtuous and intelligent, a generalization which could be of no service in any particular case. It would not be difficult to submit to Dr. Hammond scores of persons whose heads present all the peculiarities which he claims for the heads of reasoning maniacs, and who have never manifested a trait of mental abnormality; and scores of persons corresponding with his description of reasoning maniacs whose heads present none of the peculiarities which he enumerates as characteristic of that condition. To found on such cranial measurements as those to which he refers, the statement that there is atrophy of the occipital lobes, betrays a want of sufficient acquaintance with recent advances in cerebral anatomy and physiology.—*British Medical Journal*, June 24, 1882.

ABSTRACTS FROM HOME AND FOREIGN JOURNALS.

THE ALLEGED INCREASE OF INSANITY.—It appears from the Thirty-fifth Report of the Commissioners in Lunacy, that whereas on January 1, 1880, there were in all 71,191 individuals known to the Commissioners as lunatics, idiots, or persons of unsound mind, the return for January 1, 1881, gives the number as 73,113, being an increase of 1,922. The Commissioners say: "We may here at once state, that the excess in the average annual increase of numbers shown by the figures of the 1st of January last, as compared with those of the 1st of January, 1880, is fully accounted for by the diminished death-rate in asylums, hospitals, and licensed houses of the year 1880, as compared with 1879." The increase is in the pauper, not in the private, class. It is significant and interesting, as bearing upon the question "Is insanity increasing?"—which has been frequently discussed in our columns and elsewhere—notably by Dr. Mortimer-Granville in the *Nineteenth Century* two years ago (March, 1879),—that the Commissioners have introduced a new tabular statement (Table III.) showing the yearly ratio of fresh admissions to population. From this it appears that the ratios per 10,000 of admissions to population in the years 1869–80 were as follows: Totals—1869, 4.71; 1870, 4.54; 1871, 4.62; 1872, 4.59; 1873, 4.80; 1874, 5.03; 1875, 5.19; 1876, 5.30; 1877, 5.28; 1878, 5.36; 1879, 5.20; 1880, 5.19. For the purposes of this table the transfers and the admissions to idiot asylums have been excluded. The Commissioners observe: "It is, we think, an established fact that the legislature of 1874 has tended to encourage the removal of pauper lunatics from workhouses into asylums, and has thus helped annually to swell the total admissions. It will, however, be observed that, notwithstanding this fact above stated, the ratio of the yearly increase of admissions to population has been but slight and not constant, showing that the large increase in the number of the insane under care in asylums, hospitals, and licensed houses during the twelve years to which the table refers is mainly due to *accumulation* and *not to a greater annual product of insanity*."—*The Lancet*, October 8, 1882.

CEREBRAL SYMPTOMS IN DYSPEPSIA.—M. Leven has collected a hundred cases which tend to show the existence of cerebral phenomena whose presence has been heretofore overlooked in dyspepsia. Thus he has seen patients suddenly struck down in the street with true apoplectic attacks, which last from ten minutes to a quarter of an hour. Such cases were believed to be epileptic, but M. Leven suggests that they were in reality simply dyspeptic, since the cerebral symptoms entirely disappeared when the digestive troubles were cured. In dyspepsia the intelligence is unaffected, and there is never any mental disorder. Certain cerebral faculties may be altered, but the *ego* remains intact. This affection of the higher faculties, this weakening of the will, of action, of memory, and of the power of speech, may be readily observed. In some cases the patients are unable to determine upon an act, and they have to make a decided effort to perform what is generally an instinctive movement, as, for instance, to pick up anything that they have just dropped. In such cases the memory is impaired and speech is difficult, more especially after meals. The patients are melancholy, and suffer from cutaneous hyperæsthesia, a point which distinguishes them from the hysterical.—*Le Progrès Médical*, May 28, and *Practitioner*, October, 1881.

LUNACY IN SCOTLAND.—The total number of lunatics in Scotland on January 1st, 1881, was 10,012; the whole increase of registered lunatics during 1880 being 378, consisting of 29 private and 349 pauper patients. Allowing for the increase of population, the number of private lunatics in asylums has increased 15 per cent since 1858, and the number of pauper lunatics in asylums and similar institutions has increased 87 per cent. The comparison shows that, while pauper lunacy has greatly increased, pauperism in general has sensibly diminished. The number of pauper lunatics, which in 1858 was only 157 per 100,000 of the population, amounted on the 1st of January of this year to 225 per 100,000, although, during the same period, the whole number of registered paupers has decreased from 2,630 per 100,000 to 1,721 per 100,000. Since the establishment, in 1858, of the Scottish Lunacy Board, the Commissioners report that, since there has been a net increase of 4,189 in the number of lunatics under the jurisdiction of the board, or 72 per cent, the increase of the population during the same period has been only 22 per cent.

The Commissioners point out that this does not necessarily indicate an increasing amount of mental disease; but that it is probably due, in a large measure, to what is only an increasing readiness to place persons as lunatics in establishments.—*British Medical Journal*, October 29, 1881.

SLEEP AND SLEEPLESSNESS.—Sleeplessness is wakefulness, and it should always be treated from this point of view. A very common cause of insomnia in certain of its most troublesome forms, namely, those accompanied with mental restlessness and worry, is such vaso-motor disturbance or debility—it may be either or both—as prevents the conversion of the jactatory or pulsating current of the blood into a continuous and steady flow before it reaches the capillaries. When this state of affairs exists, relief may occasionally be obtained from a moderate use of some stimulant in the form of a “night-cap,” but that is a mere expedient for the service of the moment, and does nothing towards permanent cure. The rational remedy for this form of insomnia is undoubtedly a tonic treatment, acting as directly as possible on the vaso-motor centre or system; sedatives do harm. The commonest cause of sleeplessness is, however, disproportionate fatigue, by which some part or system of the organism is over-worked, while others are not sufficiently exercised. The diagnosis of cases of this class requires a very close scrutiny of the habits of life of the sufferer, and a rigorous testing of his senses and functional activities in detail. Dr. Mortimer-Granville has described thirty-six causes or forms of sleeplessness falling into this category. A scientific treatment of insomnia must obviously consist in something widely different from the administration of opium, chloral, or bromide of potassium, in such doses as may suffice to stupefy the faculties, and perhaps in a round-about way induce sleep.—*British Medical Journal*, June 3, 1882.

BRAIN FORCING IN MODERN EDUCATION.—I can not help here advertizing [Dr. T. S. Clouston, in *Puberty and Adolescence, Medico-Psychologically Considered*] to the absurd and unphysiological theories of education which are sometimes taught, and which we as medical men should combat with all our might. The old practice of attending to the acquisitive and mnemonic faculties of brain alone in education is now fortunately giving

way. The theory of any education worth the name should be to bring the whole organism to such perfection as it is capable of, and to train the brain power in accordance with its capacity, most carefully avoiding any over-straining of weak points; and an apparently strong point in the brain capacity of a young child may in reality be its weakest point from hyper-activity of one part. I have known a child with an extraordinary memory at eight who at fifteen could scarcely remember anything at all. Then, as the age of puberty approaches, one would imagine, to hear some scholastic *doctrinaires* talk, that it was the right thing to set ourselves by every means to assimilate the mental faculties and acquirements of the two sexes, to fight against nature's laws as hard as possible, and to turn out psychically hermaphrodite specimens of humanity by making our young men and women alike in all respects, to make our girls pundits and doctors, and our young men mere examination-passers. If there is anything which a careful study of the higher laws of physiology in regard to brain development and heredity is fitted to teach us, it is this, that the forcing-house treatment of the intellectual and receptive parts of the brain, if it is carried to such an extent as to stunt the trophic centres and the centres of organic appetite and muscular motion, is an unmixed evil to the individual, and still more so to the race.

Some educationalists go on the theory that there is an unlimited capacity in every individual brain for education to any extent, in any direction you like, and that after you have strained the power of the mental medium to its utmost, there is plenty of energy left for growth, nutrition and reproduction. Nothing is more certain than that every brain has at starting just a certain potentiality of education in one direction and of power generally, and that it is far better not to exhaust that potentiality, and that if too great calls are made in any one direction, it will withdraw energy from some other portions of the organ. These persons forget that the brain, though it has multiform functions, yet has a solidarity and interdependence through which no portion of it can be injured or exhausted without in some way interfering with the functions of the other portions. Even the very anatomical and histological composition of the organ might teach us this. The way in which its several elements that minister to mental functions, motion, sensation, regulation of temperature, and nutrition, are mixed up in the cortex, and even in the centres lower down, have as yet defied our anatomical and physiological investigations even to

distinguish the one clearly from the other. To say that any one man could have the biceps of a blacksmith, the reasoning powers of a Darwin, the poetic feeling of a Tennyson, the procreative power of a Solomon, and the longevity of a Parr, is simply to state a physiological absurdity. No prudent engineer sets its safety-valve just at the point above which the boiler will burst, and no good architect puts weight on his beam just up to the calculation above which it will break. Nature generally provides infinitely more reserve power than the most cautious engineer or architect. She scatters, for instance, seeds in millions for hundreds to grow, and she is prodigal of material and strength in the heart and arteries beyond what is needed to force the blood-current along; therefore we have no reason to think that any function of the brain should be strained up to its full capacity except on extreme emergencies, or that any of the receptive or sensory brain-tissues should be stored choke-full of impressions for the purpose of being frequently called up again as representations. Especially do these principles apply if we have transmitted weakness in any function or part of the organ; and what child is born in a civilized country without inherited brain weaknesses of some sort?—*The Journal of Mental Science*, April, 1882.

SINGULAR BRAIN LESION IN GENERAL PARESIS.—Dr. Baillarger has found that in some cases of general paresis there occurs a complete separation of the grey from the white matter of the brain, the two being no longer united but merely in juxtaposition. A simple adhesion of the membranes to the summit of the convolution is sufficient to produce a true decortication, which also occurs with the same, and even greater, completeness at the bottom of the sulci on the relief of the convolutions. In situations where this change has taken place, the exposed white matter is indurated, the grey matter on the other hand being softer, and both more or less atrophied. The condition may often pass unnoticed in the early stage of alteration, and it will not be apparent on removal of the membranes. It can then be demonstrated only by direct examination, or by directing a stream of water over the line which indicates the limits of the two substances.—*Annales Médico-Psychologiques*, January, 1882.

COMPLAINTS BY INSANE PATIENTS.—Dr. J. A. Campbell, Medical Superintendent of Garlands Asylum, Carlisle, read an instructive paper on the above subject, before the Medico-Psychological Association, at its last annual meeting. He said that no portion of duty was more unpleasant than having to listen to complaints of ill-treatment, or even negligence and carelessness made by patients, to investigate them, to weigh, balance and decide on the best course of action. A laxity in paying attention to such complaints was dangerous, while a too ready attention and a disposition to go to the bottom of every trifle encouraged the habit of complaining in patients, and often rendered the lives of attendants miserable. After citing illustrative cases, he gave the following summary of his conclusions:

That tact, experience, and sagacity are necessary to distinguish between the complaints that should be thoroughly sifted, and those that should be listened to and made light of.

That complaints of personal violence should be thoroughly enquired into, and that an examination of the person of complainant is the surest and most reliable mode of arriving at facts.

That evidences of violence by bruises as shown by extent, color changes and disappearance of ecchymosis is much modified by the nervous state, age, and condition as to fatness of the patient, and this, to an extent, scarcely to be credited by those who have not had good opportunities for observing it.

That "cutaneous discolorations in the insane resembling bruises," as pointed out by Dr. Blandford, are well recognized.

That occasionally, but comparatively rarely, ecchymosis true, and not to be distinguished from the result of violence, occurs from disease of vessels.

That the complaints of patients may be well founded.

That patients, however, frequently make false charges.

1st. The result of ill-feeling to one attendant or official.

2d. The result of general ill-feeling to those looking after and detaining them.

3d. The result of delusions.

4th. From an hysteric state, love of notoriety, and medical attention.

5th. The result of a confused state during the early part of the attack when perception is impaired.

6th. The result of combined soreness after an epileptic fit or fits, and the confused state described above.—*Journal of Mental Science*, October, 1881.

INSANITY AS A PLEA FOR DIVORCE.—At the Quarterly Meeting of the Medico-Psychological Association, held at Bethlem Hospital last January, Dr. Savage introduced the question of insanity as a plea for divorce. He mentioned the particulars of a case reported in the *Lancet*, December 31, 1881, in which he had recently given evidence in the Divorce Court, and the plea had been admitted. The case was *Hunter v. Edney*. A woman was married, but refused on the wedding night to allow the marriage to be consummated. The husband sent for the mother of the woman, who took her home after she had been seen by Dr. Miskin, a general practitioner in the neighborhood. Dr. Miskin was of opinion that she was insane. Some few weeks later Dr. Savage saw the case, and decided that the woman was suffering from melancholia, and not fit to enter into a contract, and that in his opinion she had so suffered for some time. The woman had no knowledge of some of the things which were proved to have taken place during the time soon following her wedding. Thus, she did not remember, so she said, making an attempt to strangle herself. The judge, Sir J. Hannen, summed up clearly and fairly, and pointed out that the woman did not appear capable of undertaking actions free from the influence of delusions, and was therefore incapable of entering into a contract like that of marriage, and he decreed the marriage *null*.

After citing this the first case of the kind which had been decided, Dr. Savage went on to say that the law of England on the subject seemed very clear—not the Statute Law, but the *lex non scripta*. He believed there was no Statute Law on the subject. One was made in George the Second's reign with regard to chancery lunatics, that the marriage should be annulled; but that Statute was repealed quite recently because it was thought that all lunatics should stand on the same basis of the Common Law, namely, that if any one is proved to have entered into the marriage bond in a state of insanity the fact is sufficient to annul it, on the principle that marriage is a civil contract, and must be entered into with the consent of capable persons. As it follows that the contracting parties in marriage must be of sound mind, the question to be decided was what would the Court consider constituted such a degree of insanity as to render the marriage void. Originally, no doubt, the opinion was that partial insanity was not a sufficient cause; but what partial insanity was gave rise to vast differences of opinion, and Sir James Hannen had recently stated that he would admit all such cases—that partial insanity, had such vast

ramifications that he could not pretend to say that one case of insanity would be a cause for divorce, and another would not, and therefore, as far as his opinion went, he had thrown the door open more widely than before. If contracted during a lucid interval, a marriage would be binding. Blackstone mentioned four cases in which a divorce had been demanded on that ground, and since Blackstone's time there had been at least four or five instances in which the fact of insanity having been proved at the time of marriage was considered in an English Court a sufficient justification for divorce. Therefore the instance referred to by Dr. Savage was not a solitary one. With regard to insanity supervening after marriage, he supposed they would be generally agreed that, if allowed, the abuse would be so great that it could hardly be carried out, although this was in some countries. In Saxony, for instance, he believed that leprosy, syphilis, epilepsy, and insanity, if incurable, were sufficient reasons for divorce, even when occurring after marriage. The English law or practice upon this subject seemed to him the rational one. He might add that a year or two ago he had some correspondence with Delasiauve, the great authority on epilepsy in Paris, on the question of divorce in this disease when present at the time of marriage, and he related an interesting case in which an epileptic married, and on the same day he was seized with a violent epileptic fit. Delasiauve was consulted, and did all he could to have the marriage annulled by bringing the subject under the notice of the Minister of Justice. He failed, however, though cohabitation was delayed three weeks. The fits became more and more frequent, and he died in three years, leaving three children. The French law, therefore, does not appear to recognize dissolution of marriage for epilepsy, and yet a French Civil Court did, in 1844, annul a marriage contracted by an epileptic. The man in this case murdered his wife's father on the day of the wedding. The parties had not cohabited. —*Ibid.* and *Lancet*, December, 31, 1881.

REMARKABLE CASE OF SELF-MUTILATION.—Dr. Thiersch reported, at the Surgical Congress held last year in Berlin, the case of a man, 37 years of age, who first performed complete circumcision on himself, and then, "in order to see what was inside," slit up his abdomen from the symphysis to the navel. He came to the *clinique* with prolapsed peritoneum and intestines, and was soon discharged cured. A year later he returned with his scrotum slit

open and testicle prolapsed. This injury was recovered from in nine days. In 1880 he opened his abdomen for the second time, when, after replacement of the prolapsed gut, recovery occurred in a fortnight. Shortly thereafter he performed a regular castration of one testicle, with careful suture of the scrotum. As soon as the wound had nicely healed, he removed the second testicle with the same care, with the exception that the ligature around the spermatic cord slipped off, and caused profuse hemorrhage. He was again brought to the hospital, and again he recovered.—*Allg. Ztsch. f. Psych.* Bd. XXXVIII, Heft, III.

LOCALIZATION OF BRAIN-FUNCTIONS.—The question of the definite localization of brain-functions—which concerns the psychologist directly, but also were it only because the psychologist can not, or at least does not, treat it without making free use of psychological terms—has remained under constant investigation since it was last reported on in *Mind* XVIII. Some farther report is now necessary, not that the question has been brought nearer to a determinate solution, but because for the moment the researches of the two foremost investigators—Golz in Germany and in this country Ferrier—appear to have resulted in a complete deadlock. It is enough to refer to the work of the two physiologists just named, for though Munk and others have obtained experimental results that differ from Ferrier's in detail, they can not be said to raise any new question of principle.

Golz, whose previous memoirs have been noticed in *Mind* (V., VI., XVIII.) as they appeared in *Pflüger's Archiv*, has all along held a position of exceptional strength. He was the first experimenter who kept his subjects (dogs) alive long after operating on them, and could thus distinguish between the passing effects of the operation and the permanent deficiencies of function (*Ausfallerscheinungen*) resulting from the different lesions. Ferrier's observations, set forth in his *Functions of the Brain* (1877), were open to the objection that they represented nothing but passing effects, since his subjects (monkeys) either died or were intentionally killed soon after the operations; and it would have been, on this ground, impossible to maintain them in their original form against the contrary statements of Golz, had they not appeared to be supported by a steadily increasing store of clinical observations on human beings. Now, however, while Golz, on the one hand, tells us in a new memoir (the fourth) in *Pflüger's Archiv*.

(xxvi., 1-49,) that his own previous results have been absolutely confirmed by new experiments of a more accurate description,—on the other hand, monkeys treated as Ferrier treated them have been kept alive for periods of seven or eight months from the time of operation. Permanent deficiencies of function have thus been noted on the one side as well as on the other. The rival theorists have also lately engaged in a public discussion of their views, at the meeting of the International Medical Congress held in London last August, and a full report of the discussion appears in the *Transactions* of the Congress (London, Kolckmann) i., 218-43. Besides preparations, diagrams, &c., displayed on either side, Golz exhibited alive one of his dogs which had lost the greater part of the upper cortex of both hemispheres, while Ferrier produced two living monkeys, one with extensive destruction of the "motor zone" of the left hemisphere, and the other with its "auditory centre" in each hemisphere extirpated. After the different effects contended for had been demonstrated on the living subjects, the dog and the first of the two monkeys were killed, in order that their brains should be subjected to closer examination. This has been carried out by a committee of independent observers, who have already furnished preliminary reports, also printed in the *Transactions*.

Golz's new method of experiment, as set forth in his last memoir, enables him to remove particular portions of the cortex with much greater exactness than before. He accordingly divides the accessible upper portion of the two hemispheres (behind the frontal convolutions proper) into four quarters—two anterior and two posterior, and removes them or any selection of them at will (approximately). The general results, so far as the question of localization is concerned, are thus summed up by himself: "(1) The hypothesis of circumscribed centres subserving special functions in the cerebral cortex is untenable. (2) There is no section of the cortex exclusively devoted to sight, to hearing, to smell, to taste, or to touch. (3) It is impossible by any limited destruction of the cortex to cause permanent paralysis of any muscle, or to withdraw it from the influence of the will. (4) The vital manifestations from which we infer intelligence, feeling, passions, instinct, do not depend on functionally distinct regions of the cortex. (5) Destructive lesions of anterior regions of the cortex cause deficiencies which differ in some respects from those caused by lesions of the posterior regions; the difference being perhaps explicable from simultaneous lesion of the underlying white fibres

leading to the crura." So far as yet made out, the difference amounts only to this—that while removal of the forward regions shows itself in clumsier movements and reduced tactile sensibility, removal of the hinder lobes more distinctly affects sight and the other specialized senses: and this concession, if it may be regarded as a concession, to the localization-hypothesis is guarded by the suggestion that the ground of the difference is to be sought for not in the cortex itself, but in the underlying white tracts. The general intelligence is also somewhat more affected in destruction of the hinder lobes, but this result in Golz's view must be ascribed to their larger extent; since it is always upon the *amount* of lesion (both hemispheres being involved) that he has found permanent deficiency of function mainly to depend. The deficiency is manifested in generally lowered intelligence with blunted sensibility; but even when the destruction is carried so far as to reduce the animal to perfect imbecility, there is not one of its senses through which it may not still be stimulated, nor one of its muscles over which it has lost control. So far, indeed, may the destruction be carried by Golz's newer method, that in one case, he declares, he found the powers of movement, with some form of every one of the modes of sensation, remaining, though the brain as preserved after death weighed only 13 grammes, against 90 grammes as the normal weight of the brain, similarly treated, in a similar subject!

Ferrier, on the other hand, has found that his own earlier assertions of loss of particular functions in monkeys newly operated on apply equally to subjects that have long recovered from the disturbing effects of operation. The monkey, proved by autopsy to have lost nearly the whole of the motor area in the left hemisphere, and no other part of the cortex, remained affected with motor hemiplegia of the right side seven months after operation, while otherwise appearing in full possession of its normal powers. The other deprived of the strictly limited portion of one particular convolution (superior temporo-sphenoidal) in each hemisphere, which Ferrier from the first had fixed on as the "auditory centre," appeared to have lost all power of hearing, and to have lost nothing whatever besides. Other confirmatory cases were adduced at the public discussion, and are reported in the *Transactions* referred to above.

What is to be made of a conflict of evidence that seems as if it could hardly be more pronounced? Ferrier can only suggest that the discrepant results of Golz are inexplicable from the lower

organization of dogs. Just as frogs can perform many complex and even apparently purposive acts after the removal of the hemispheres altogether, so he thinks that with greatly mutilated hemispheres dogs may still through lower centres remain liable to be affected and able to act in ways not possible for monkeys, much less human beings. Nor is the suggestion without point as against Golz, who is ready to talk of his mutilated dogs as mere "reflex eating machines," and is not disposed to dogmatize as to the subjective character of that varied sensibility which he maintains is left after destruction of the cortical substance has been carried to the utmost accessible limit. The suggestion, however, by no means suffices to remove the difficulty. A dog is not so different in the conditions of its intelligence from a monkey that a wholly different relation may be supposed to obtain between the higher and lower brain-centres in the one and in the other. The cortical substances can hardly be indispensably necessary for the simplest reaction upon an optical or auditory impression in a monkey and quite superfluous in a dog; and the case is even harder to conceive, for, on Ferrier's view, it is one small fractional area of the cortex that is thus indispensable in monkeys for sight or for hearing. The newer facts adduced by Ferrier do nothing to obviate the objection that has before been urged against him in these pages—that he takes the brain for much too loose an aggregate of parts much too simple and distinct. That at any of the circumscribed spots denominated by him "motor" or "sensory centres," through all the thickness of the cortical substance, just one particular class of motor impulses or of sense-impressions is to be understood as organically provided for—is an assertion that would take one knows not what amount of experiment and clinical observation to prove. Golz's conception of the intricate constitution and working of the brain, so far as he has yet shadowed it forth, must be said to come much nearer to meeting the requirements which psychology would make of physiology; and, so long as such facts can be produced as Golz has recorded in his memoirs, it is hard to believe that Ferrier rightly interprets the different facts which he on his side may now be allowed to have established.

It clearly, however, becomes the duty of Golz, in carrying forward (as he promises in his last memoir) the inquiry into localization from his own point of view, to meet his opponent upon common ground and show (if he can) that the more developed brain of the monkey is also not the simple congeries of distinctly circumscribed centres, which evidently the dog's is not. Mean-

while, it is needless to dwell upon the circumstance noted by the committee of experts in the two brains submitted to closer examination, that the lesions in neither case have been confined to the cortical substance. Too little is known of the relation in which the white tracts in the hemispheres stand to the cortex to give ground for suggestions that can yet help to reconcile the discrepant results. It should only be mentioned that in both cases the basal ganglia appeared to be unaffected by the lesions from above. The discrepancy, therefore—to call it by the mildest name—may be held as really affecting the brain proper, and in the brain pre-eminently the grey cortical matter, which all are agreed in regarding as that organic structure whose functions are most immediately related to the processes of subjective mental life.—*Mind*, (Editor of) April, 1882.

The following is a summary on the same subject, from the *Revista Sperimentale Freniatria*:

Couty had occasion to try, on a large scale, on dogs and several varieties of monkeys, the effects of cortical lesion. He presented to the Biological Society a number of communications on the subject, the principal of which we shall now state. He shows himself a disciple of Brown-Séquard, and denies, in the full extension of the term, the existence of any cortical localization whatever.

1st. The extent of the cortical motor zone, determined by the excitement of the induced current, was found by Couty to be very variable in the dog and the monkey. In some cases, for example, all the convolutions of the sigmoid gyrus were excitable; in others, on the contrary, only a single convolution was so. Thus, in the monkeys, the convolutions of the whole region between the curved fold and the anterior third of the parallel convolutions, or the ascending frontal, were found excitable; in many the excitable zone was even limited to the Polandic sulcus. Further, the disposition of the motor zone varies in the same animal, in different moments of the same experiment. Indeed, in comparing the effects of successive electrizations on the same brain, the motor zone in general is seen to contract by little and little, and to disappear before or soon after death. In certain cases (more rarely) we may observe the multiplication and extension of the pretended motor centres.

The number of the excitable points is extremely variable in the dog and the monkey. The author never observed in the animal

all the centres of movements described, and frequently one, two, or even more were wanting (of the eyelids, lips, tail, and the hind legs). The disposition of the motor points varies in different animals, nor is there in different brains any relation in the situation of a given centre. The situation of every motor point varies in the same animal in such a way that the frontal convolutions (for example) will be successively the centre for the fore leg, the tail, the lips, or both limbs during the same experiment. No relations can, therefore, be established between a movement and a given point of the cerebral cortex. It is to be observed that Dr. Couty employed currents weaker than those used by Ferrier, on animals slightly anæsthetic, or in perfect normal state.

2d. In sequence to lesions of the brains, of different nature, (abrasions and cauterizations, superficial or deep) he found that in the same animal there might follow, at periods very different, on the same, or on different muscular groups, two sorts of motor disorders, paralyses and contractures. On testing the cortical excitability in monkeys and dogs obviously paralyzed, he found it almost always abolished. In two dogs completely recovered from intense and prolonged paralytic symptoms, the cortical excitability of the injured hemisphere did not reappear; the other hemisphere alone was sensible to electricity. Couty relates that from his first experiments he had observed that *all cortical lesions, whether anterior, posterior, or median, could determine opposite paralytic disorders*, which were, however, *more marked and durable, following medio-anterior lesions*. Having limited, in a monkey, a zone which acted on the face, he destroyed it and found symptoms of general paralysis. Again, in dogs on which excitation of a cortical point caused movement of a hind leg, the destruction of this cerebral part produced paralysis of both legs. (Query: which two—both hind, or the hind and fore?) Inversely on the dog and the monkey, limited lesions, for example, on the half of the ascending frontal, which had rendered it inexcitable, produced no appreciable symptom. From these facts Couty denies any relation whatever between the nature and seat of the lesion, and the nature and seat of the motor disorders following.

3d. Diminution of cutaneous sensibility is frequently produced after cerebral lesions; disorders of motion are, however, more rare. The seat of these is always on the side opposite to the lesion. No relation exists between the seat of a cerebral lesion and cutaneous insensibility, the author having realized this fact on dogs and monkeys after both anterior and posterior lesions. He

observed that diminution of insensibility never occurred alone, but was always associated with motor disorders. He very frequently observed a diminution or a loss of the palpebral reflex of the eye opposite to the lesion. In sixty animals he met only seven times (in four monkeys and three dogs) with a diminution of sight in the opposite eye. Complete blindness was never produced. The visive disturbances always coincided with other disorders of motion, and sometimes of sensibility. He denies any relation between disturbances of sense and the nature and seat of the lesion. No disorder of intelligence followed destruction of the most anterior zone in three monkeys and several dogs. In other cases also of cerebral lesions, he observed no distinct disturbances of intelligence.

4th. What is the intimate mechanism of these diverse disorders, which follow alike a cortical lesion, whether anterior, posterior or median? In order to discover this, Conty, in place of studying the state of the brain, and of the peripheral organs, directs his attention to the examination of the functions of the bulb and the medulla, and he found them always much modified.

The disorder most constantly produced by a cortical lesion is the diminution or loss of the reflex motions, and most frequently on the side opposite to the lesion; the animal, for example, does not withdraw the limb on this side on being punched or pricked, and does not move the eye on being stimulated by light. This diminution or loss of reflex motion is not to be confounded with sensitive disorders, which are much more rare, nor with motor disorders. He frequently observed (in one-half of the cases) disorders of coördination of various forms (as shakings, tremors, ataxy, rotary movements generally limited to the side opposite to the cortical lesion). Now all these disorders could be explained only by a *pathological modification of the apparatus of the medulla* to which they correspond. So, therefore, the author always found modified the different functions of the medulla and the bulb in animals that presented disorders apparently cortical, and he was induced to seek in these intermediate modifications the unique cause of all the phenomena observed. In support of this opinion he adduces the following arguments: 1st. If the white fibres go directly from the brain to the muscles, they ought to comport themselves alike in the brain and the medulla. Instead of this it is observed that whatever may be the mode of cortical paralysis, at the moment in which the cortical white fibres become inexcitable, those of the medulla are very sensible to electricity;

all the centres of movements described, and frequently one, two, or even more were wanting (of the eyelids, lips, tail, and the hind legs). The disposition of the motor points varies in different animals, nor is there in different brains any relation in the situation of a given centre. The situation of every motor point varies in the same animal in such a way that the frontal convolutions (for example) will be successively the centre for the fore leg, the tail, the lips, or both limbs during the same experiment. No relations can, therefore, be established between a movement and a given point of the cerebral cortex. It is to be observed that Dr. Couty employed currents weaker than those used by Ferrier, on animals slightly anaesthetic, or in perfect normal state.

2d. In sequence to lesions of the brains, of different nature, (abrasions and cauterizations, superficial or deep) he found that in the same animal there might follow, at periods very different, on the same, or on different muscular groups, two sorts of motor disorders, paralyzes and contractures. On testing the cortical excitability in monkeys and dogs obviously paralyzed, he found it almost always abolished. In two dogs completely recovered from intense and prolonged paralytic symptoms, the cortical excitability of the injured hemisphere did not reappear; the other hemisphere alone was sensible to electricity. Couty relates that from his first experiments he had observed that *all cortical lesions, whether anterior, posterior, or median, could determine opposite paralytic disorders*, which were, however, *more marked and durable*, following *medio-anterior* lesions. Having limited, in a monkey, a zone which acted on the face, he destroyed it and found symptoms of general paralysis. Again, in dogs on which excitation of a cortical point caused movement of a hind leg, the destruction of this cerebral part produced paralysis of both legs. (Query: which two—both hind, or the hind and fore?) Inversely on the dog and the monkey, limited lesions, for example, on the half of the ascending frontal, which had rendered it inexcitable, produced no appreciable symptom. From these facts Couty denies any relation whatever between the nature and seat of the lesion, and the nature and seat of the motor disorders following.

3d. Diminution of cutaneous sensibility is frequently produced after cerebral lesions; disorders of motion are, however, more rare. The seat of these is always on the side opposite to the lesion. No relation exists between the seat of a cerebral lesion and cutaneous insensibility, the author having realized this fact on dogs and monkeys after both anterior and posterior lesions. He

observed that diminution of insensibility never occurred alone, but was always associated with motor disorders. He very frequently observed a diminution or a loss of the palpebral reflex of the eye opposite to the lesion. In sixty animals he met only seven times (in four monkeys and three dogs) with a diminution of sight in the opposite eye. Complete blindness was never produced. The visive disturbances always coincided with other disorders of motion, and sometimes of sensibility. He denies any relation between disturbances of sense and the nature and seat of the lesion. No disorder of intelligence followed destruction of the most anterior zone in three monkeys and several dogs. In other cases also of cerebral lesions, he observed no distinct disturbances of intelligence.

4th. What is the intimate mechanism of these diverse disorders, which follow alike a cortical lesion, whether anterior, posterior or median? In order to discover this, Couty, in place of studying the state of the brain, and of the peripheral organs, directs his attention to the examination of the functions of the bulb and the medulla, and he found them always much modified.

The disorder most constantly produced by a cortical lesion is the diminution or loss of the reflex motions, and most frequently on the side opposite to the lesion; the animal, for example, does not withdraw the limb on this side on being punched or pricked, and does not move the eye on being stimulated by light. This diminution or loss of reflex motion is not to be confounded with sensitive disorders, which are much more rare, nor with motor disorders. He frequently observed (in one-half of the cases) disorders of coördination of various forms (as shakings, tremors, ataxy, rotary movements generally limited to the side opposite to the cortical lesion). Now all these disorders could be explained only by a *pathological modification of the apparatus of the medulla* to which they correspond. So, therefore, the author always found modified the different functions of the medulla and the bulb in animals that presented disorders apparently cortical, and he was induced to seek in these intermediate modifications the unique cause of all the phenomena observed. In support of this opinion he adduces the following arguments: 1st. If the white fibres go directly from the brain to the muscles, they ought to comport themselves alike in the brain and the medulla. Instead of this it is observed that whatever may be the mode of cortical paralysis, at the moment in which the cortical white fibres become inexcitable, those of the medulla are very sensible to electricity;

the bulb also behaves in the same way as the lumbar medulla. 2d. The excitability of the brain is lost at the same time as, or a little before, that of the sensitive nerves, for example, the ischiatic nerve; but the animal that has lost its reflex cortical movements and its reflex peripheral movements, still preserves the medulla very excitable. This shows that the white cortical fibres are analagous to the centripetal peripheral, and distinct from the conductors. 3d. By using curare, which is a peripheral paralyzing agent, and has the property of arresting successively the transmission of voluntary excitations and excitations of the bulb, and ultimately the medullary or asphyxic movements, it is seen that in animals curarised and completely paralyzed in every voluntary movement, and finally in that of respiration, the effects of cortical electrization still persist. The electrization acts not on the cerebral cortex, but on the bulbo-medullary grey substance, since its effects augment, diminish, and are suppressed with the doses of curare which cause the variations of the reflex or asphyxic movements.

5th. In conclusion Dr. Couty holds that the effects of cortical irritation or lesions are always indirect, and due to intermediary disorders of the apparatus comprised between the brain and the peripheral organs,—to-wit: the bulb and the medulla vertebralis.—*Revista Sperim. di Freniatria*, An. VII., Fascic. III.

THE TREATMENT OF THE CRIMINAL INSANE.—The question of providing for the criminal insane has been brought to the attention of the legislature of Massachusetts again this year, and this time upon a petition from the trustees of all the State insane asylums, by the strong recommendation of the Prison Commission, and with the decided approval of the State Board of Health, Lunacy, and Charity. It can hardly be supposed that so urgent a demand for a matter of such evident need will be refused. * * *

During 1879, the latest year for which these statistics are available, there were for England and Wales, with a population fifteen times as great as that of Massachusetts, 323 criminals in insane asylums, 528 in the Broadmoor Criminal Asylum, and in prisons 294 cases of insanity, of whom 21 men and eight women were removed to insane asylums or to Broadmoor. The teachings of English experience are that

(1.) The expense of caring for the criminal insane must be at least double that for the other insane, although a great deal of work can be expected of both classes.

(2.) Male convicts becoming insane while serving sentences are kept in prison, as a rule, until their term of punishment is nearly over, partly because Broadmoor is so full that new buildings would need to be put up for them if they were sent there, and partly because it is thought desirable to keep them where the life is most like punishment, and to prevent as far as possible attempts at simulation.

(3.) The criminal insane are transferred from the criminal asylum to the lunatic hospitals as soon as their condition justifies the change.

(4.) In round numbers, in 1879, twenty of the criminal insane per million of the population were confined in the criminal asylum, twelve in lunatic hospitals, in prisons ten (on the supposition that the 294 cases of insanity represent about 260 persons).

(5.) The number of the criminal insane really cured or curable is so small (not over six per cent, counting relapses and recurrent attacks) that the protection of society is the chief thing demanded in their treatment.

(6.) Provision for their confinement is of three kinds: in the prisons, chiefly in special cells or rooms; in an asylum as secure in all respects as a prison but entirely remote from one, and in the ordinary insane asylums.—*The Boston Medical and Surgical Journal*, April 6, 1882.

PROTECTION OF THE INSANE, OR OF THE SANE?—If ever fate should require us to define the nineteenth century in four words, we should note it as The Age of Societies. From Czar-destroying Muscovite to the pious American, the rage for union is triumphant; from red-handed communism to Bible-distribution, every possible wish, thought, or hope of the human race seems to have its association. Therefore are we not surprised at the "Proceedings of the National Association for the Protection of the Insane," which has recently been put upon our book-table. Reporters, disguised, forcing their way into insane hospitals in order to make a sensation and earn their penny a line, lawyers overbrimming in court with philanthropic eloquence concerning the sufferings of some client not too insane or too impecunious to recognize the golden springs that moves legal emotion to its centre, learned judges on their benches, newspaper editors in search of a sensation, and doctors eager for notoriety and fees, have made such a din that a quiet voice asking for protection of the sane is not to be heard; and as there is no

taint of consulting visits or legal processes upon the breezes that blow from such quarters, we suppose it will not be possible to have a flourishing society to protect the sane against the insane; but assuredly the sane suffer more from the insane than do the insane from the sane.

Sitting in court the other day, we saw an old man with face scarred and furrowed as a tree torn and blasted with lightning: one eye gone, health ruined, a victim of the insane,—of the vitriol-man. Picking up the newspaper this morning, the first paragraph gave account of the murder of a family by their crazed mother. Going into a patient's house, the story was told us of the whole family life ruined by the doings of a member really insane, but not yet quite insane enough for the law to step in,—of a daily martyrdom by worry beyond endurance and constant terror of disgrace.

Is there any of our readers who has not seen, time and again, instances like these? Are not the papers and the courts full of them? The nearest friends of the vitriol-thrower had been warned by physicians that the father was insane. After the throwing, the law stepped in; but that did not help the ruined victim. Legislators seemed to have thought only of preserving the liberty of the insane, never the lives and hopes of the sane.

We have not written these words in any spirit of opposition to this National Association, but to call attention to the fact that the insane at present probably inflict more injury upon the sane than the sane do upon them, and that such an association should use any influence it may have to secure laws which should benefit both sane and insane. Assuredly, when a person is really insane and in law not responsible, the law should hold some one responsible that this person is so guarded and watched that the community shall not suffer.

The name of the present association is a most unfortunate one: it does what probably it was meant to do,—minister to the public notion that the insane are an oppressed class, ill-treated in asylums, and often preyed upon by designing friends who find readily tools in the profession for nefarious work; whereas the truth is that physicians in charge of insane asylums, and physicians who give certificates, almost without exception are both able and honest men; and it is little less than an outrage that any physician should try to climb into power or wealth over the shoulders of these men by the cruel hooks of a public prejudice.—*Philadelphia Medical Times*, July 1, 1882.

SELF-INJURY AMONG THE INSANE.—Dr. H. Schüle, of Illenau, Germany, narrates, in the *Allg. Zeitsch f. Psych.*, Vol. XXXIX., Heft., 1, a number of interesting cases of self-injury among the insane, and on the principle that to be forewarned is to be fore-armed, advises a collection of similar occurrences in other asylums. He is forced to the conclusion, from his own experience, that every conceivable, and at times the most incredible, self-inflicted injury may occur. He omits all cases of suicide, and confines himself, with the exception of injuries to bones, to cases of self-mutilation in which the life of the patient was preserved. He enumerates these cases in topographical order:

Head.—Depilation of scalp and face. A paralytic pulled out the hairs of his beard one by one, under the delusion that he would become an angel, and that a feather would supply the place of each hair. Cephalo-hæmatoma (three cases, one in a case of delirium tremens, one in dementia following acute mania, and one in a case of melancholia in a girl). These all healed under a simple cotton dressing. Driving in of needles, nails and sharp-edged stones; pulling out of eyelashes; injury to conjunctivæ by rubbing, the introduction of sand, &c.; perforation of the tympanum by small wooden splinters; othæmatoma; amputation of tongue, occurring in a melancholic girl, with a serrated shoemaker's knife. This last patient partly regained the power of articulate speech, after gradual healing of the wound. A similar case has recently been reported from another asylum. A woman, believing the devil was sitting on her tongue, tore out the member with her hands, unaided by any instrument. Her tongue was found on the floor. She was also able to make herself understood after the wound healed.

Neck.—Incised wounds, mostly in the median line and toward the thyro-hyoid membrane, on which account they were, as a rule, less dangerous. One man inflicted an injury more to the side, cutting through the deep fascia of the neck. The patient died in eight days with symptoms of paralysis of the pneumogastric nerve. Another, who had often threatened suicide, was placed in a cell naked, and notwithstanding a thorough search of his person, succeeded in concealing between his fingers, although separately outstretched, a small knife-blade, with which he cut his throat in the night.

Swallowing living animals (in one case a toad), insects, pieces of glass, spoons, keys, needles, &c. A patient who clandestinely swallowed half a spoon at table was seized three months after-

wards with colicky pains, and had bloody stools. A year and a half later, an abscess formed in the right inguinal region, from which, on being opened, the spoon-handle was withdrawn. A patient who swallowed needles died with severe phlegmon of the neck. *Breast.*—Two women tried to remove their nipples with a ligature. *Abdomen.*—Castration; lacerated wounds of penis; amputation of penis (two cases before admission); introduction into the urethra of stones, needles, splinters of wood; introduction of a comb into the vagina, and of an iron hook into the anus.

Dr. Rieger, of Würzburg, mentions a case in which a patient enucleated one of his eyes with his fingers, and afterwards tore off the optic nerve. He cited as his motive the passage in the Bible (Matth. v., 29), "And if thy right eye offend thee," &c.

BOOK REVIEWS AND NOTICES.

Die Körperlichen Grundlagen der Geistesstörungen; ein Vortrag.
(Lecture on the Physical Basis of Insanity.) By PAUL FLECHSIG,
Leipzig, 1882.

This pamphlet contains the author's inaugural lecture on the occasion of his accession to the newly established chair of Psychiatry in the University of Leipzig. This professorship had an ephemeral existence in the beginning of this century, when the famous Heinroth lectured with great *éclat*. He appeared in those days as the extreme apostle of the so-called psychical school, a fact of no little interest in the present connection. To this modern Stoic man was but the personification of the principle of spontaneity, of self-consciousness and self-responsibility in nature. Not the gifts of nature, body, soul, consciousness, freedom, reason, were regarded by him as that which constitutes man; but the actions of his will in the manifestations of his moral or immoral conduct. He ridiculed as an imposition all attempts to determine to what extent, if indeed at all, the actions of man were influenced by physical causes. To him man's soul was only morally tangible and morally affected. Theories of physical pathogenesis were especially obnoxious to him, and regarded as the vain conceptions of misguided minds. Thus, respecting the causes and nature of insanity, he said: "This sinking into the abyss of mental darkness and disease is not the Nemesis alone: it is man's own fault because man can not be compelled, can not be constrained, if he does not himself willingly yield to the constraint." And again: "Innocence will not be perverted into insanity; * * * but the soul laden with sin." "Nature can never affect what is solely the

work of freedom," and "Derangement of the mind has its sole origin in the abuse and misuse of freedom." Soon Heinroth stood alone with his exclusive doctrines. Meanwhile there sprang up in France a school which, although going to the opposite extreme, and largely misunderstood in its consequences—as Madame de Staël said, "*tout comprendre, ce serait tout pardonner*"—bade fare to become the gospel of the new era.

This digression into retrospect will be pardoned in view of recent gratuitous expressions of opinion, by would-be psychological experts, in the medical and lay press, in connection with the Guiteau crime. Both extremes were here again revived and used as a means of misleading the public on questions which so intimately connect true psycho-pathology with the most recondite problems with which the human mind has to grapple.

The author of this little pamphlet places himself exclusively upon the solid basis which regards insanity as a symptom of brain disease, or, in other words, mental derangement as an evidence of disease of the organ of mind. Similarly, from the standpoint of medical jurisprudence, the author joins issue with Griesinger, and declares emphatically that it is for the physician to investigate and determine, in all cases, as to "how much an individual, at a given time, by the existence of *organic causes*, was impeded in the logical construction and apprehension of his ideas, and in the normal manner of conceiving and carrying out resolutions." The exposition of the subject is such as to force the conviction that the author sustains this point. As might be expected in a publication of this kind, there are scarcely any new facts recorded, but the paper bristles with original thought, and may be taken as an earnest of the manner in which Dr. Flechsig will utilize the rich material at his disposal in his proposed

course of lectures. Concerning the significance of anatomico-pathological evidences of disease, he does not regard as in any way diminishing the value of that which has already been accomplished, the fact that there are nevertheless a number of cases in which no histological equivalent can be reasonably adduced as having a direct bearing on the symptomatology. This would involve the postulate that all forms of mental disorder are susceptible of anatomical characterization and classification, which the author believes impracticable, of course, in the present state of our knowledge, if indeed such a thing can ever occur. Different causes may produce the same effects so far as they are accessible to observation. Some symptoms, the author suggests, may also have their equivalent in an altered chemical constitution of certain compounds in the still unformed protoplasm, or in the chemically altered interchange of material whereby may be developed compounds of different affinity from the normal for nerve cells, fibres and tissues, as well as for the substances artificially introduced into the general change of material. Facts have been observed which point toward the existence of such conditions, as, for instance, the different effects of certain alkaloids and other substances, as alcohol, etc., upon sane as well as insane persons. No one will deny that this is a not infrequent occurrence; and that these processes, so long as they are transient, may act within the limits of physiological change, even in combination, to some extent at least, with abnormal symptoms, without presenting perceptible anatomical lesions is a fact which will be similarly appreciated. But that these factors should be capable of producing such continued functional disturbance as is invariably involved in the conditions of which insanity must be considered an evidence, without actually

having any equivalent in structural change, does not seem admissible. We do not believe the position tenable that, as regards the physiology of health and disease, the organ of mind differs from any other in the economy. The time will doubtless come in the progress of science when the anatomico-pathological condition which underlies symptoms so marked and of such duration will be established, as the result of a well-defined morbid process.

In connection with the question of localization of brain-function, Flechsig expresses himself more charily, at any rate with greater caution (especially as regards the cerebral grey cortex), than some modern writers. As regards the diagnostic value, however, of the elementary mental disorders, the author proposes to divide them, like cerebral symptoms in general since Griesinger's time, into the two groups, "diffuse" and "foci" symptoms. In order to give brief expression to the present status of the question, he is inclined to comprise under the general head of "mental foci symptoms," all those phenomena which consist in anomalies of the individual conceptions derived from experience, and as "symptoms of diffuse affection," more especially all disturbances of those faculties which connect the individual conceptions, according to the given forms of *a priori* conceptions of space, time and casuality, and in general to the more complex conceptions, self-consciousness, &c. Arguments in favor of and against this view, especially with reference to the question of insanity, are perhaps equally divided, but as the author does not enter into a discussion of the subject, we must withhold comment until we are in possession of further communications from him. In these days of so much superficial and unphilosophical argumentation, Flechsig's little pamphlet will repay careful perusal.

Insanity and its Treatment. Lectures on the Treatment of Insanity and kindred Nervous Diseases. By SAMUEL WORCESTER, M. D., Lecturer on Insanity, Nervous Diseases and Dermatology, at the Boston University School of Medicine. New York: Boericke & Tafel, 1882.

Dr. Worcester in his preface says that the publication of these lectures has grown out of inquiries made "by students and others for the best work on insanity, one giving at the same time a knowledge of homœopathic therapeutics." With the exception, he says, of Jahr's *Mental Diseases* no such work existed, and he has attempted in some measure to supply the want.

Dr. Worcester has complimented the *JOURNAL OF INSANITY* by quoting largely from its pages, and his very preface borrows the motto of Grotius found upon the title page of each volume: "The care of the human mind is the noblest branch of medicine." He subscribes fully to the views of those who regard insanity as a symptom of disease of the brain. He quotes various definitions of insanity, but does not give one of his own, nor does he indicate his preference for any of those quoted.

We copy a few of the "leading indications" in puerperal insanity which fairly illustrate the general style of the portions devoted to therapeutics. "When fear of approaching death is a prominent symptom, especially when accompanied by an inflammatory state of pulse: *Acon.* She imagines herself a criminal, *Bellad.*, *Cuprum*, *Mercur.* Fixed ideas: *Ignat.*, *Silic.* Despair of her salvation: *Ignat.*, *Laches.*, *Pulsat.*, *Sulphur.* Apprehends want and means of support: *Bryon.*, *Calc. Carb.*, *Nux Vom.* She has visions of ghosts and demons: *Arsen.*, *Bellad.*, *Cuprum*, *Opium*, *Platina.* When haunted by visions of rats and mice: *Arsen.* and *Calc. Carb.* When by vermin and worms:

Cimicif., *Nux Vom.* When she imagines herself surrounded by dead bodies; or sees pins everywhere: *Silic.* Fear of being poisoned: *Hyosc.* and *Rhus tox.* Objects appear large to her, everything is magnified: *Hyosc.* and *Cann. Ind.* Objects appear smaller: *Platina.* She swears and scolds: *Anac.*, *Lycop.* She tries to escape: *Ballad.* and *Stramon.*," and so on."

* * * * * "Gelsemium is one of my favorite remedies and in my hand it occupies a place between Aconite and Bellad. It has cataleptic immobility with dilated pupils, closed eyes but conscious. Desires to be left alone; irritable, sensitive. Loquacity, brilliant eyes, shooting through temples. Depression of spirits, and anxiety or solicitude about the present. Fear of death.

On page 277 we are told—

The effects of Hepar upon the sensorium are [sic] of a very *depressing* character, causing most frightful *anguish* and fearfulness, as of perishing in consequence of this condition, which may not be at all serious; particularly during the evening hours, and before midnight; the sadness is so great that one meditates suicide. When walking alone in the *open air* one feels greatly discouraged and ill-humored, is reminded of all the disagreeable thoughts and occurrences of a lifetime, and is apprehensive upon no reasonable ground about one's own family and some impending misfortune.

Surely Hepar is to be avoided. However Dr. Worcester does not confine himself to homœopathic remedies and homœopathic doses. He recommends chloral in doses of from twenty to thirty grains, bromide of potassium in ten and fifteen grain doses, and other well known drugs are suggested, occasionally with the proviso, "if homœopathic remedies fail." The book is largely made up of quotations and, as we have before stated, many of them are from the JOURNAL OF INSANITY, others, notably in the chapter on Non-restraint, are taken from the reports of the Utica State Lunatic Asylum. There is little of scientific value in

the work, and we have only noticed it at this length to illustrate how far devotion to a dogma may lead its votaries.

Indigestion, Biliousness, and Gout in its Protean Aspects.
Part I—*Indigestion and Biliousness.* By J. MILNER FOTHERGILL, M. D. William Wood & Co., New York, 1881.

There is something so racy and *ad populum* in Dr. Fothergill's style, so many "outward limbs and flourishes," that the reader never finds him dull, even when his writings contain nothing new or of great scientific value. This, however, would be scant praise for the volume before us. Taking the ground that an acquaintance with function in health can alone guide us to a knowledge of disordered function, he treats the subject of indigestion and biliousness from a physiological standpoint, and affords the practitioner an excellent *vade mecum* for the rational management of "the accursed hag, dyspepsia." Beginning with a chapter on "Natural Digestion," he follows it up with one on "Primary Indigestion," and shows how this may be due to (1) imperfect disintegration; and (2) defective solvent power. The multiform symptoms are carefully weighed, and the appropriate treatment indicated. This latter is, of course, largely dietetic, and few physicians, if any, have given more attention to this subject than the author. Secondary indigestion is treated under the heads of "neurosia," "reflex," "cardiac," and "toxæmic." There is also a chapter devoted to indigestion as an intercurrent affection, in discussing which the author is unusually liberal, if not altogether happy, in the use of similes. Meteorology, scripture history, as well as naval and military science, are all pressed into service to provide illustrations. Thus:

The aspect of a case may suddenly be clouded like a bright April day, may suddenly alter with the swift oncome of a dark

rain-cloud, racing up with the wind. It may shew at first "like a man's hand," arising out of the sea, as did that which caused Elijah to send word to Ahab, yet, "it came to pass in the meanwhile, that the heaven was black with clouds and wind, and there was a great rain." So the prospects of a case may be suddenly obscured; and almost before danger is scented, the aspect may be profoundly changed. A little nausea, the surface of the tongue altering, a rise of temperature, and the case doing well may be suddenly endangered; as the Eurydice, sailing with her stun-sails set, was sunk bodily by a squall coming up unnoticed behind Shanklin Downs. * * * No matter what the form of disease, when these indications of acute disturbance in the digestive tract shew themselves, it behoves the practitioner to put the hands on deck; the craft is in danger, more or less imminent. The coming risk must be faced. To use another simile, when a general sees that he is being threatened with a flank movement, he makes his disposition accordingly; he changes his front so as to face his new foe.

The chapter on "Diet and Drink" is of especial value to Americans. The author points out that "strong food does not necessarily involve strength," and suggests a dietary which we all might live up to with advantage. Speaking of American dyspepsia in connection with iced drinks, he says:

Iced drinks are very grateful to the thirsty, but too much indulgence therein produces a torturing thirst. * * * Just as snowballing causes the hands, first to feel cold, and then to glow with heat if continued; so the constant application of an iced fluid to the fauces, at first grateful, becomes a sense of intense discomfort: for the blood-vessels are first contracted, and ultimately paralyzed, and then the fauces glow with warm blood, like the skin of the snowballer's hands.

The remaining chapters are devoted to the liver, its functions and disturbances; and the book closes with an appendix on "The Failure of the Digestive Organs at the Present Time"—a very suggestive article. This failure is ascribed to the tremendous demands made upon the nervous system now-a-days, and the author

shows how, in this way, the "commissariat of the active or animal part of the body" undergoes profound modification. A paper by Dr. Bulkley on "The Failure of Nutrition in Children" is incorporated in the appendix. Altogether the volume will prove a helpful addition to the practitioner's library.

Lehrbuch der Gehirnkrankheiten für Aerzte und Studenten. (Text-book of Diseases of the Brain for Physicians and Students.)
By Dr. C. WERNICKE, Privat-Dozent, University of Berlin.
Two Volumes. Berlin: 1881-82.

In the copious literature of diseases of the central nervous system, published during the last five years, Dr. Wernicke's book deserves especial mention as one evincing great originality of observation, experimentation and thought.

The first volume is divided into two parts, viz.: 1. An anatomico-physiological introduction. 2. Semeiology of brain diseases. The first eighteen sections, 195 pages, are devoted to the topographical anatomy of the encephalon. Pages 195 to 276 contain the physiology of the organ, and the remaining ninety-four the semeiology of its diseases. The anatomical part is after the still unsurpassed model of Theod. Meynert. The first chapters present an enlarged and more elaborate reproduction of the author's (Wernicke's) "*Das Urwindungssystem des menschlichen Gehirns.*" It is scarcely necessary to remark that in the special anatomical description of the organ, its component parts and the relations of these to each other, the more recent researches of Gudden, Gowers, Forel, Huegenin, Luys, Flechsig, Stilling, the author, and others, have all received due consideration. The description is enhanced by nineteen diagrams and sixty-nine illustrations from natural

preparations, only three of which are not original. It is, according to our judgment, the most lucid exposition yet offered.

The physiological part commences with the labors of Fritsch and Hitzig. The labors of Ferrier are acknowledged with the meagre compliment that he has given a very intelligent and graphic description of the movements produced by cortical irritations, and determined or circumscribed the motor region in the brain of apes. And Nothnagel's classical experiments receive but cursory mention. The highest authority on this subject, in the author's opinion, is H. Munk, of Berlin, whose experimental researches he reproduces in detail, and whose conclusions and terminology, as "cortical blindness, cortical deafness," &c., he adopts. The significance of aphasic symptoms, and especially of those produced by affections of the second (sensory) centre of speech, discovered by the author, as regards the true interpretation of cortical function, is also discussed in this part of the book.

Wernicke, in transferring the cortical regions in the brain of apes to that of man, points out the following:

- A. Sphere of vision: Surface of occipital lobe.
- B. Sphere of hearing: Temporal lobe without defined limits.
- C. Leg-region: Upper third of the central convolutions and upper parietal lobule, with the exception of its anterior margin.
- D. Arm-region: Middle third of the central convolutions, lower margin of the lower parietal lobule, posterior third of the third frontal convolutions.
- E. Head-region: Lower third of the two central convolutions and the neighboring parts of the first frontal convolutions.
- F. Eye region: Gyrus angularis, viz.: the larger part of the lower parietal lobule which is not bordered by the sylvian fissure.
- G. Ear-region: The marginal convolution of the lower parietal lobule.
- H. Neck-region: Part of the frontal lobe, closely anterior to the middle third of the anterior central convolution.

I. Trunk-region: The remaining convex surface of the frontal lobe.

The author adds: "The extraordinary development of the frontal lobe in the human brain seems, at first sight, to preclude all attempts to apply the results of experiments on the brain of apes to that of man. This difficulty, however, will disappear when we consider how numerous the conceptions of movements (*Bewegungsvorstellungen*) must be, which the erect walking of man requires."

Section 2 treats of "The Theory of Epilepsy; the Cortical Centres of Heat." It contains a critical review of the literature of the subject and will be read with interest. The physiological part then closes with a valuable description of the motor and sensory tracts of the hemispheres, and a treatise on nerve nuclei and special centres.

2. Semeiology of diseases of the brain. This part begins with the following remark: "The brain differs from all other organs in that it is composed of very many parts of quite different significance, and that it can only be regarded as an entity so far as its histological structure is concerned. The morbid affections of each area of special function, therefore, produce special clinical phenomena, which consist in the disturbance of this special function."

The number of morbid processes of clinical importance to which the encephalon is subject, is limited. Two of these spread over the whole surface of the brain, and are to be considered as diffuse affections, viz., meningites and progressive general paralysis, and, as a sequela of these, chronic hydrocephalus. The other morbid processes are so-called foci diseases, viz.: Cerebral hæmorrhage; cerebral softening; tumors; abscesses, and sclerosis. The latter may be taken as the transition to diffuse affections.

The phenomena of diffused affections, considered, are:

1. Disturbances of the sensorium and the intellect.
2. Disturbances of the vegetative functions.
3. Disturbances of the subjective state of health.
4. Neuritis optica.
5. Convulsions.

The phenomena arising from foci are:

1. Hemiplegia, hemiparesis, hemicontractions.
2. Its sub-divisions, as monoplegia of the face, the arm, the leg, etc.
3. Hemianæsthesia with its sub-divisions.
4. Independent paralyses or phenomena of irritation of the cerebral nerves.

Wernicke's second volume opens with a long preface replete with polemical disparagement, directed more especially against Goltz's "*Functions of the Cerebrum*" and his criticism of Munk's experiments and deductions; against Brown-Séquard's views regarding cerebral localizations, and those of Nothnagel (*Topical Diagnosis of Cerebral Diseases*) concerning the diagnostic value of the symptomatology of morbid foci in the brain.

The book is itself an interesting monograph on cerebral hæmorrhage and cerebral softening.

I. Cerebral hæmorrhage. The author calls especial attention to his own views on the mechanism of the affection. The effect upon the brain of an effusion in the encephalic cavity must be regarded as the equivalent of a sudden mechanical shock, generally of such intensity as not to confine itself to the site and immediate neighborhood of the effusion; but extending, it may be, through the whole of one hemisphere, or even still further. The site of the effusion is, therefore, in the beginning not of much consequence, in so far as

the accompanying phenomena are at first of a more general hemiplegic character. These complex symptoms only disappear gradually, and finally become reduced to such more defined disturbances of function as correspond to the organic defect which was produced by the destruction of the parts directly exposed or involved in the injury. The term "foci symptoms" should only be applied to this remaining class of symptoms, but the author does not agree with Nothnagel, who fixes a period from six to eight weeks after the access as the time when the effects of the secondary affections have ceased to operate. Either a much longer period, say two years, should be selected, or each case should be disposed of according to its individual characteristics. The effect of the mechanical shock is equal to the action of a moving body upon another at rest. The author calls this the "traumatic momentum" of cerebral hæmorrhage, and this of course can be measured in any given case, when the mass or quantity in motion and its velocity are known. The quantity here is, first of all, dependent upon the extent of the rupture and stands in direct relation to the calibre of the vessel. The traumatic momentum therefore increases in proportion to the diameter of the respective vessel. The velocity of the mass in motion, on the other hand, may be identified with the pressure of the blood in the vessel: the higher the pressure the more rapid the blood will flow out, or the greater the amount of blood which, in a given time, will pass the point of rupture. The author's argument is as follows: Since the measure, therefore, for the traumatic momentum is given with the product of the mass into the square of its velocity, it is evident that the second factor, which comes into play in proportion to the square of its action, must greatly outweigh the other and become of far more

importance. For this reason even small differences in the blood pressure should have due consideration, or in other words, the traumatic momentum is more directly dependent upon the degree of blood pressure than upon the lumen of the bleeding vessel. Applied to the circulatory arrangements in the brain it thus becomes evident that the traumatic momentum in the basal and trunk regions of the encephalon must be more considerable than in the centrum ovale, and here still greater than in the cortex.

The material elaborated by the author is arranged in the following order:

1. Aetiology and anatomical appearances.
2. Symptoms of traumatic hæmorrhage.
3. The apoplectic injury.
4. The foci symptoms of cerebral hæmorrhage.
5. Cases comprising lesions, in the following order: Nucleus lenticularis; internal capsule; frontal lobes; temporal lobes; occipital lobes; motor region; thalami optici; pendunculi cerebri; bi-lateral cerebral hæmorrhage; pons Varolii; cerebellum; medulla oblongata.

Diagnosis, prognosis and therapy of cerebral hæmorrhage, close up the first 109 pages of the volume.

II. Softening of the brain: Encephalo-malacia. As regards the phenomenology of this affection, the author considers the traumatic element as likewise playing an important rôle in the original process. Here the injury to the brain is produced by the sudden occlusion of the cerebral vessels. The immediate effect may be considered from a point of view similar to that of cerebral hæmorrhage, although in this case the direct mechanical shock is the result of the collapse of vessels which have been suddenly occluded by emboli. The process is that of filling a vacuum at the point of collapse, and must necessarily be associated with actual displacement or even laceration of brain tissue. We

can readily conceive that there may occur also in these cases, as in cerebral hæmorrhage, an extension of the direct influence of the traumatic momentum to regions remote from the seat of the lesion. The author considers the symptomatology of this affection likewise under two heads: (1) Symptoms of a more general character, occurring in the earlier stages, and (2) those which continue presenting features corresponding to the defect in the organ as the result of the lesion.

The foci symptoms in brain softening differ quite frequently, however, from those of cerebral hæmorrhage in their transient character, especially when due to embolism or thrombosis in regions in which compensation is facilitated by the collateral circulation.

The pathological process of brain softening is a tissue necrosis which terminates in fatty degeneration, and is frequently associated with calcareous infiltration; calcified ganglion cells and nerve fibres may be found in the softened foci. Cerebral hæmorrhage, as we have already seen, occurs especially in the trunk region of the brain, and rarely in the cortex. The foci of softening, so far as we know, have no especial seat, but they are more likely to be found in the cortical substance than in the trunk on account of the greater area of the former.

The author has collected in this part of his work a great number of valuable clinical cases which will repay careful perusal, yet it seems to us that in the interests of the practitioner and the student for whom he writes, a more systematic arrangement of the material might have been made. Section 42 treats of aetiology, 43, of anatomical appearances, 44, of symptoms and course, 45, of chronic softening of the brain, and 46, of the foci symptoms of brain softening.

The author distinguishes two stages in chronic softening of the brain, namely: (1) the progressive stage, and (2) the stage of arrest.

The former is marked by the slow development and increase of the foci symptoms, and may last a year or more, terminating in complete hemiplegia. In the second stage no further increase in the foci symptoms is demonstrable. If the case terminates fatally, death is, in most cases, due to intercurrent disease of other organs, and not to the brain affection itself. The favorite seat of this form of softening is the centrum ovale of the hemisphere, and it is often found to be of considerable extent.

In section 47, Wernicke introduces a new form of disease: "Acute hæmorrhagic polyencephalitis superior." The floor of the fourth ventricle, especially in the neighborhood of the motor nuclei, as the direct continuation of the anterior horns of the spinal cord, is, like the latter, a favorite seat of independent disease, probably of an inflammatory character (polymyelitis).

Yet even in regions above the medulla in the basal portions of the brain, we meet with very similar affections. Here also their seat is in the nerve nuclei, but exclusively in those connected with the muscles of the eye. It is a distinct, acute, inflammatory disease, which terminates in death in from ten to fourteen days. The foci symptoms consist in associated paralysis of the muscles of the eye, which rapidly progresses and terminates in an almost total paralysis of the muscular apparatus with few exceptions, as the sphincter iridis or levator palpebrarum. The gait becomes unsteady, and exhibits a combination of ataxia and stiffness resembling that of drunkards. The diffuse symptoms (of a general character) consist in a disturbance of consciousness characterized by somnolence, which may be preceded by excitement of some duration.

There were in all cases evidences of inflammation at the papillæ opticae. Wernicke cites three cases of this rare disease, in one of which it occurred after poisoning by sulphuric acid, while in the others it followed the excessive use of alcohol.

The second part of the book closes with a description of the vascular arrangement of the brain, in which the author recapitulates the results arrived at by Heubner and Duret. Wernicke's book must be welcomed as a contribution of unusual value to the subject of which it treats.

Medical and Surgical Reports of the City Hospital of the City of Boston. Third series. Edited by DAVID W. CHEEVER, M. D., OLIVER F. WADSWORTH, M. D., and A. L. MASON, M. D. Boston: Published by the Trustees, 1882.

The excellent reputation which the staff of the Boston City Hospital have attained is well sustained by this contribution to the literature of medicine and surgery. We have no data from which to judge of the amount of material from which the cases for this report were drawn, but it is evident that the editors and contributors have exercised a rare discretion in the selection, and that they have gathered such as are "most interesting and useful for comparison and reference."

The reports open with an article by Dr. S. G. Webber entitled "The Pathological Histology of the Spinal Cord," thirty-three pages and three plates of which the first six pages and plate I. are devoted to the normal histology of the spinal cord. The article is not characterized by great originality, except it be in the author's general method of treating his subject, and is, therefore, not calculated to materially increase our knowledge. Although Dr. Webber has shown great zeal and attained success in the microscopic study of

his subject, his article contains nothing which recent hand-books, and notably Leyden's "Klinik der Rückenmarks-Krankheiten," do not contain. His style is at times careless, and some of his ideas regarding the nature and development of morbid processes are, to say the least, peculiar. Under the head of "Acute Myelitis," he says:

At the commencement of this process the nerve-fibres and cells suffer in their nutrition and are finally destroyed, but the earliest change is in the neuroglia. The blood vessels may be first affected; then the changes in the nervous tissues and the neuroglia are secondary, and partake more of the character of necrosis than of inflammation. It may be very difficult to decide which change is primary and which secondary. Occasionally the diseased blood vessels rupture, etc.

This is a strange composition. The part which the neuroglia plays in the different forms of acute myelitis may still be *sub judice*, as well as the existence or non-existence of Charcot's form without development of granule cells and without the participation of the neuroglia in the morbid process, which is said to consist in a primary and acute inflammation and atrophy of the ganglion cells; but the primary affection of the circulatory system is in all cases a matter beyond dispute. Whether the secondary change, as the author says, partakes more of the character of necrosis, in a given case, or of inflammation is, first of all, dependent upon the cause of the impairment of nutrition. The former is more likely to occur in consequence of an entire cutting-off of the blood supply, as by embolism; the latter, as a result of a local or general hyperæmia, the migration of the formed elements of the blood into the tissues, or actual hæmorrhage. Pathological change in the circulatory system is invariably the starting-point of all morbid processes. The study of the vascular arrangements of

organs, especially as regards their pathology, thus becomes of great importance. Yet the author says (page six), in speaking of the normal histology of the cord, "The vessels of the spinal cord do not require special description." We take decided exception to this statement, inasmuch as the blood supply in the spinal cord is both peculiar and interesting. We are not yet in possession of one good and accurate description of this subject except the recently published and still incomplete work of Albert Adamkiewicz: "*Die Blutgefäße des menschlichen Rückenmarkes. Theil I. Die Gefäße der Rückenmarkssubstanz.*" (The blood vessels of the spinal cord of man—Part I. The vessels of the substance of the cord). Gerold's Sohn, Vienna, 1882.

Following the article by Dr. Webber, Dr. Stedman contributes "Notes of Typhoid Fever," comparing and analyzing the cases admitted from January 1st, 1871, to January, 1881. We have not space to follow Dr. Stedman in his interesting study of this subject. During the period covered by the paper 1,036 cases were admitted, with a mortality of 186, or 17.9 per cent. This percentage is diminished by substituting 28 deaths occurring within 48 hours after admission. Under the head of treatment it is interesting to note that the lowest mortality rate, 7.8 per cent., occurs in those (371 cases) who received no treatment beyond occasionally a sedative dose—sponging now and then, or fever mixtures for a few days. The next lowest rate is 9.5 per cent in 94 cases treated by quinine, salicylic acid, etc.,—these were generally mild cases. The highest death-rate occurs in 202 cases "largely of the most formidable sort, treated by alcohol two ounces or more of brandy, three ounces or more of sherry, or a pint or more of champagne, daily;" of these 37.1 per cent.

died. In looking over the cases forming the basis for this paper, Dr. Stedman says: "I feel justified in believing that 600 of them would have done well without any other treatment than milk with quiet and careful nursing. Of 500 others, very many have been saved by the use of remedies under close observation." He believes further that a knowledge of whether the patient needs remedies as distinct from food and nursing "is imparted by the rapidity of the pulse, in all but a few cases." One or two typographical errors have remained undetected, for example, in speaking of the "fortunate lack of autopsies," the text clearly implies that Dr. Stedman meant *unfortunate*.

Dr. Draper gives next an interesting synopsis of fifty medico-legal autopsies. These were made under the new law of Massachusetts, which places the examinations in various parts of the State in the hands of carefully selected physicians, who act under a commission from the State, thus removing this important part of coroners' examinations from the hands of the too often careless and incompetent hands of some medical hanger-on about the coroner's office. The results detailed in Dr. Draper's paper should do something to direct the attention of other States to the importance of carefully and scientifically conducted autopsies in legal cases.

Following Dr. Draper's article, Dr. Cheever contributes a paper on surgical cases. The first subject of which he treats is excision of goitre, of which four successful cases are reported. A fifth case died of pyæmia following the use of setons, excision being impossible. Under the head of Aneurism he reports an interesting case of cirroid aneurism of the temporal region, and one of traumatic aneurism following a punctured wound of the thigh. The third article in

the series of surgical cases is upon excision of cancer of the tonsils. Dr. Cheever recites that in 1869 he removed a malignant tumor of the tonsil by cutting down upon it from the outside of the neck and opening the pharynx. This operation he considered at the time original with himself. He has since learned that Von Langenbeck operated externally in 1865, and Hunter performed a similar operation in the same year, neither of these cases having been published at the time of Dr. Cheever's operation. He refers to the various methods of operation of the two following, and describes in detail the procedure adopted in the cases now reported. In the present instance the tumor was removed by a section of the lower jaw, which was divided just in front of the masseter muscle. Tracheotomy was next performed, and the pharynx separated from the trachea by a sponge over the glottis. The two pieces of the lower jaw were everted and held upwards and inwards, the other upwards and outwards. The operation for the removal of the diseased mass was perfectly successful. The ends of the divided bone were wired together and united firmly. Subsequently, however, the malignant growth returned. The article is illustrated by heliotype engravings of the histology of the normal tonsil and cancer of the tonsil. The other operations referred to in Dr. Cheever's article are Neuroma of the Formative Trunks of the Brachial Plexus, Naso-Pharyngeal Polypus, Laryngo-Tracheotomy for Foreign Bodies and for Tumors, Spina-Bifida, Excision of the Lower End of the Rectum and Ventral Rupture through a Sinus.

Dr. Lyman contributes a synopsis of the gynæcological cases treated in the hospital for the five years preceding 1881. These cases constitute the usual routine of women's diseases seen in a general hospital. The

surgical abstract, contributed by Dr. Gay, contains a number of cases of considerable interest. A fatal case of amputation at the hip for enchondroma of the femur, under the care of Dr. Thorndike, is reported. Another case of removal of a stone from the peritoneal cavity is of interest not only on account of its surgical aspects, but as a curiosity in the literature of medicine. The patient, a sailor, had been in the habit of crowding either a belaying pin or a bottle into the rectum to relieve retention of urine. On one occasion not having a bottle, he procured a stone five and one half inches long by three in width and weighing two pounds, and having greased it applied it to the anus and sat upon it, when suddenly the stone slipped into the rectum above the sphincter. Various efforts were made to withdraw the foreign body, but, in some manner rupture of the walls of the rectum occurred, and the stone passed into the peritoneal cavity, whence it was removed by Dr. Thorndike, and the patient fully recovered. But five cases of trephining have occurred in the hospital in five years. Of the eight excisions of the hip five have died. Excisions of the elbow-joint have been followed by only one death; the single excision of the shoulder-joint terminated fatally. The other articles in the volume are all of interest, but we are unable at this time to refer to them specifically. The adjustable fracture-box described and illustrated under "New Surgical Apparatus," seems somewhat too complicated for ordinary use.

The example set by the Boston Hospital and a few similar institutions in the United States, in thus utilizing the large amount of clinical material at their disposal, should be more generally followed by hospital physicians and surgeons throughout the country.

Hagen: *On Kidney Diseases as Causes of Insanity*. Allgemeine Zeitschrift für Psychiatrie, XXXVIII, p. 1. ff.

The cases reported to illustrate the subject are divided into two groups, viz., (1) Cases of more or less acute nephritis or Bright's disease, and, (2) Cases of chronic degeneration of the kidneys and of defects in these organs.

The first group comprises twelve cases, some observed by the author himself and some collected from others. The clinical features showed that the concomitant psychoses were of a melancholic character, there being fears of persecution or poisoning, desire to escape, and homicidal and suicidal attempts. In six cases there existed a period of maniacal excitement for one day only, passing then into the opposite condition; in only one case was the former state of longer duration. Apathy, discontent, and stupor alternated with the state of excitement. Mistaken identity was observed in several of the cases, hallucinations of hearing and sight in one case each, epileptiform attacks in one, and convulsions in two. In all cases there was no doubt that kidney disease existed previous to the mental disturbance. One case made a complete recovery, and the others, after periods of remission and intermission, terminated fatally with symptoms of kidney disease. The author discusses the difficult question, how far it would seem justifiable to connect the psychoses aetiologically with the kidney affections. After careful consideration he concludes that the existence of a causal relation can not well be denied. With this concession, the psychical phenomena would enter, as a kind of appendix to the other cerebral symptoms occasionally occurring in kidney affections, viz., coma, delirium, sopor, etc., into the general clinical picture of the disease. It now remains for us either to anatomically demonstrate

the brain lesions secondarily produced in these cases, or to prove the presence of abnormal compounds in the blood, which, being retained in it or newly developed in connection with the morbid processes in the uropoetic system, have an irritating action on the cortical ganglia of the brain. We, at least, can not convince ourselves of the existence of so-called functional disturbances without a demonstrable anatomical or chemical equivalent in the organ destined to perform those functions.

The cases of the second group are all of the author's own observation. The form of mental disturbance is here also prominently of a melancholic character; the patients have gloomy and depressing hallucinations and delusions of persecution; they abstain from food, and become noisy and violent. The course of the disease in these cases was very varied; in the first, acute delirium closed the scene; in the second, pneumonia; in the third, apoplexies with disturbance of speech, melancholic delusions, terminating after a maniacal paroxysm, in dementia, preceded death; in the fourth case there was hereditary influence; the patient had previously suffered from attacks of melancholia, had a remission, and after a short recovery developed a complexus of cerebral symptoms which proved fatal. In the last two cases the autopsy revealed a number of diseased foci in the brain. In all the cases extensive defects in the kidneys were observed; in the first, a cystic degeneration with atrophy; in the second, hydronephrosis with granular atrophy; in the third, granular atrophy of both kidneys; in the fourth, extensive atrophy of the left kidney and a congenital defect in the right.

A Treatise on Diseases of the Eye. By HENRY D. NOYES, A. M., M. D., Professor of Ophthalmology and Otology in Bellevue Hospital Medical College, etc., etc. New York: William Wood & Co., 1881.

This volume forms one of Wood's Library of Standard Medical Authors, and is in many respects one of the most valuable of the series.

Dr. Noyes is so well known as an authority in this special field of medicine that his writings may almost be considered as coming *ex cathedra*. The character of the series of which this volume forms a part necessitates condensation, but the author has not sacrificed conciseness to brevity. The first part of the work is devoted to an account of the general anatomy and physiology of the eye, the methodical examination of the eye, general nature of diseases of the eye and treatment, accommodation and its diseases, errors of refraction, and their diagnosis by ophthalmoscopic and other means, diseases of the muscles of the eye, paralysis, strabismus, etc. Much of this portion of the work is of interest to practitioners not in the specialty of eye diseases, and especially are the chapters upon the methods of examination, and upon paralyzes of the ocular muscles of interest to those devoted to a study of nervous diseases.

The second and more extensive part of the work treats of the diseases of the eye itself including the lachrymal apparatus and eyelids. Dr. Noyes, in the chapters comprising this part, has drawn largely from his large experience, and at the same time exhibits a familiarity with the ophthalmic literature of the day, from which he quotes freely. He has succeeded in producing a work which will, we predict, be well received, and, we hope, be the foundation for a more extended and critical treatise.

A Treatise on the Materia Medica and Therapeutics of the Skin.
By HENRY G. PIFFARD, A. M., M. D. William Wood & Co.,
New York, 1881.

In this volume of three hundred and fifty pages the author gives us what has been the outgrowth of his own requirements. Each drug is discussed under four general heads. 1. Its effects on the healthy skin after ingestion. 2. Its effects on the healthy skin after local application. 3. The skin diseases in which it has been found curative or useful when administered internally. 4. The skin diseases in which the drug has proved useful when applied locally. In introducing the subject of therapeutics, the author takes occasion to censure the exclusiveness and immoderation of the Vienna School. He shows that the physiological and functional relations of the skin are so closely connected with the rest of the economy, that the doctrine of a purely local affection, independent of pre-existing derangement of the general system or of particular organs, can not be insisted on. This Hebraic doctrine has led to too narrow a conception of disease, and the consequence has been that treatment has been less efficient than might have otherwise been the case. A formulary of favorite prescriptions closes the volume.

A Treatise on Albuminuria. By W. HOWSHIP DICKINSON,
M. D., Cantab. William Wood & Co., New York, 1881.

In this exhaustive treatise the author describes those diseases which are made known during life by the presence of albumen in the urine. The important questions which have arisen since the appearance of the first, are duly dealt with in this, the second edition, and many illustrations have been added. The work thus maintains its reputation as a reliable hand-book.

SUMMARY.

OPENING OF A NEW ASYLUM IN ARKANSAS.—The new asylum at Little Rock, Arkansas, will be ready for the admission of patients in January next.

APPOINTMENT OF DR. STEPHEN SMITH AS N. Y. STATE COMMISSIONER IN LUNACY.—The Governor has appointed Dr. Stephen Smith, one of the Surgeons to Bellevue and St. Vincent's Hospitals, New York, to succeed Dr. John Ordronaux as N. Y. State Commissioner in Lunacy.

RESIGNATION OF J. W. LANGMUIR, Esq.—Mr. Langmuir has resigned his office as Inspector of Prisons and Public Charities for the Dominion of Canada. Dr. O'Reilly and Mr. Robert Christie have been appointed his successors, the latter's work to be restricted to prisons exclusively.

THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.—The thirty-sixth annual meeting of the Association was held in Cincinnati, May 30th—June 2d, 1882. Several interesting papers were read and discussed, three of which appear in the current number of this JOURNAL. The members of the Association were very hospitably entertained by the profession in Cincinnati. It was resolved to hold the next meeting at Newport, R. I., next June. The official publication of the minutes and other papers is deferred till our next issue.

THE REVISION OF THE NEW YORK LUNACY CODE.—In the New York Senate, on January 4th, ult., it was

Resolved, That the Attorney-General and State Commissioner in Lunacy be requested to report to the Legislature such amendments to the laws relating to the insane as may be necessary for the better perfecting of the same, and that they be further requested to make such report at as early a day as may be practicable.

The following is from a circular addressed to the Judiciary of the State and the leading members of its Bar, under date February 8th, 1882:

While our present Lunacy Laws are in the main satisfactory, and no extensive revision or radical changes are deemed necessary, it is yet believed that these Statutes need to be developed in portions at least of their provisions, so as to enlarge the areas of guardianship within which they are intended to exercise the parental supervision of the State over its insane wards.

For this purpose, and in advance of any suggestions which it may devolve upon us to make, we are anxious to secure a full conference with the Judiciary of the State and the leading members of its Bar.

The points to which we would more particularly direct your attention, and upon which your opinion is solicited, are:

1st. The question of bringing the present form of government of each State Lunatic Asylum as a public charitable trust under one uniform system of administration.

2d. The proper limits of *extra judicial* supervision of such Trusts, by the State Board of Charities.

3d. The limitations to be put upon the powers of personal custody of lunatics exercised by their Committees in removing them *extra-territorially*.

4th. The length of personal custody, involving restraints upon personal liberty, and regulation of the domicile of habitual drunkards, which should be imposed upon them when adjudicated to be such.

5th. The disposal of insane criminals acquitted on the ground of insanity in respect to the question,

1st. Whether any determinate time may be fixed by the Court, during which such party should be detained for personal observation and *public safety* in an Asylum, and if not, then,

2d. Whether any date can be fixed before which no application for a release, on the ground of alleged recovery, shall be entertained.

6th. Whether permanent insanity, requiring the confinement in an insane Asylum of either a husband or wife continually during seven years, and being adjudicated thereafter as probably incurable shall constitute a valid ground for divorce; providing that in case of the insanity of the wife she shall not thereby forfeit her right of dower by reason of any decree dissolving the marriage.

This last inquiry has been suggested to us, with a view to eliciting an expression of public opinion upon it.

7th. If in your experience of the practical operation of these Statutes any modification or changes are deemed necessary, you will oblige us by stating them.

Early replies to the above inquiries are solicited under the request of the resolution calling for speedy report.

Very respectfully yours,

LESLIE W. RUSSELL,

Attorney General.

JOHN ORDRONAUX,

State Commissioner in Lunacy.

ASSAULT ON DR. ORANGE.—We are deeply grieved to hear that a murderous attack was made on Dr. Orange, Superintendent of the Broadmoor Criminal Lunatic Asylum, on June 6th, 1882. We are indebted to a local newspaper for the following account of the assault. It appears that the Rev. J. H. Dodwell, who is confined in the asylum in consequence of having been declared insane when charged some few years ago with shooting at the Master of the Rolls, had preferred a request to consult Dr. Orange with reference to a letter which he stated that he wished to write to a brother resident abroad. While Dr. Orange was seated in a chair and engaged in looking over some papers which Mr. Dodwell had asked him to read, Mr. Dodwell, who was standing by his side, suddenly and without warning dealt him a blow on the crown of the head with a stone slung in a handkerchief. Happily, Dr. Orange, although somewhat stunned, was able to hold his assailant and prevent him from inflicting any

further injury until he was secured by the attendants. The motive which prompted this act appears to have been of a character precisely similar to that which instigated the assault upon the Master of the Rolls. Mr. Dodwell has informed the authorities that more than a year ago he made up his mind that, as the firing of a pistol not loaded with ball at the Master of the Rolls had not proved sufficient to obtain for him justice, he should be forced to commit some still more serious act, and that he came to the conclusion that nothing less than an act of murder would be sufficient for the purpose. We are happy to state that notwithstanding the force of the blow the condition of Dr. Orange affords ground for hope of his recovery, as will be seen from the following communication from Dr. D. Nicholson, the Deputy Superintendent: "Dr. Orange sustained a somewhat severe scalp wound, and there has been very considerable general shock, in addition to the local concussion about the head. He is not yet able to leave his bed, and it is necessary to keep him absolutely quiet; but I am glad to say, for the information of his numerous friends, that he has made, and still continues to make, steady and favorable progress." Still later advices are to the effect that Dr. Orange's recovery is assured, although some time must elapse before he returns to the active duties of his position. We heartily congratulate the eminent Superintendent on his escape from death, and ourselves on the preservation of a man who, we hope, may long live to direct the care and treatment of the unfortunate class to which his assailant belongs.

STATISTICS OF INSANITY IN AUSTRIA, BAVARIA, AND ITALY.—*Austria*.—In Kellie's "Austrian Sanitary Statistics," for the year 1876, we find that, in the

States of the Empire represented in the Government Council, there were twenty-two public and nine private institutions for the insane, containing 8,609 patients, 54.9 per cent males, and 45.1 per cent females. Of these, 8 per cent were discharged recovered, and 12.7 per cent died.

In the general population the percentage of the unmarried is 60.4 (30.5 male and 29.9 female). Among the insane in the institutions the percentage of the unmarried is 55.9. But it must be borne in mind that 33.8 per cent of the population are under fifteen years of age, while the insane of that age are only .9 per cent. Hence of those over fifteen years of age, the proportion between the single in the general population and the single among the insane is as 26.6 to 55, which is strongly in the favor of married life. The largest number of insane was furnished by Bohemia, 2,467; next by Low Austria, 1,518; and least by Dalmatia, 43. 15.7 per cent of the cases occurred in persons between 35 and 40 years of age; 15 per cent in those of 30 to 35; while under 10 years, 20 cases (three per cent) are recorded.

Insanity was found to occur most frequently in persons occupied in mental labor, this class comprising 1.33 per cent of the population, and 9.66 per cent of the insane. Merchants and those engaged in the industries comprise 13.1 per cent of the population, and 34.53 per cent of the insane. The proportion among the farmers and foresters was more favorable, viz., 37.32 per cent of the population and 19.33 per cent of the insane. Among the causes of insanity are mentioned: heredity, 18.2 per cent; depression, care, and anxiety, 12.5 per cent; intemperance and sexual excesses, 12.3 per cent.—(*Wiener Medic. Wochenschrift*, 1881, No. 21).

Bavaria.—Majer (Report of the Bavarian Sanitary Commission, 1878) states that in Bavaria, with a population of 4,863,450, the number of insane in all the asylums in the year 1878 was as follows:

Patients under treatment, males, 1,484; females, 1,337.

Admitted during the year, males, 562; females, 492.

Discharged, males, 512; females, 422.

Recovered, males, 117; females, 137.

Improved, males, 118; females, 97.

Unimproved, males, 141; females, 89.

Died, males, 136; females, 99.

Number of patients at the close of the year, males, 1,533; females, 1,405.

Of those admitted, 24.1 per cent recovered; 20.4 per cent were improved; and 21.8 per cent unimproved.

Of those discharged (including deaths) 27.2 per cent had recovered; 23 per cent were improved; 24.6 per cent unimproved; and 25.2 per cent died.

Of the 868 admitted, 61.6 per cent were cases of primary insanity (melancholia and mania). The larger number were between 26 and 30 years of age. As regards civil condition, 55.2 per cent of the males and 48.5 per cent of the females were single; 29.3 per cent of the males and 39.8 per cent of the females were married; and 5.5 per cent of the males and 11.7 per cent of the females were widowed. Hereditary influence was recorded in 42 per cent of the cases (six per cent oftener in female than in male patients).

The proportion of insane to the whole population in Bavaria is 1 to 1,655.

Italy.—In the congress of medical officers of Italian asylums for the insane, held in September 1880, E. Morselli estimated the number of persons suffering from brain and nervous diseases in Italy to be 142,000, or 1

in 200 of the whole population. During the years 1869 to 1878, he found among men at the age of twenty subject to military duty 49.81 in every 10,000 unfit. Of these 2.18 were insane; 10.51 idiots and cretins; 11.53 epileptics; 25.59 subject to nervous diseases in general. As to their nativity, the largest number of insane was in Liguria, 4.07, and Emilia, 3.87; the least in Basilicata, 0.50, and Umbria, 0.70. Of idiots and cretins the largest number was found in the Alpine regions of Lombardy, 16.94, and Liguria, 16.66; the least in the classical country of the Roman race, Latium, 5.49, and Calabria, 5.72. The largest number of epileptics, 22.05, was furnished by Sicily, and especially Catania and Palermo; next to these by Liguria 21.54; the least by Apulia, 5.56, and Basilicata, 6.25. Of those subject to nervous diseases in general the largest number was in Liguria, 44.86, and Sicily, 34.23; the least in Apulia, 15.08, and Latium, 15.63.

From these statistics the author draws the conclusion that the greatest portion of insane, epileptics, imbeciles, etc., is furnished by those provinces in which are recorded the most political intrigues, and crimes against person and property.

At the same meeting, A. Verga (The causes of insanity in Italy) designates as the most common cause of insanity, pellagra, namely, 8.88 per cent, (7.22 per cent males and 10.75 per cent females); (2) congenital brain diseases, and those acquired in early youth, as cretinism, idiotism, and imbecility, 7.77 per cent; (3) diseases peculiar to women, viz., hysterical and puerperal affections, 6.93 per cent; (4) epilepsy, 6.68 per cent, (7.73 males and 5.51 females); (5) alcoholism, 3.92 per cent; (6) excesses in general, 1.16 per cent among females and 3.73 per cent among males. Verga considers that excessive exertion and overwork are the

causes of the frequent occurrence of paresis among Italian physicians.

—In our last number we promised, as an appendix to the article, "United States v. Charles J. Guiteau," a review of the medico-legal aspects of this important trial. We regret that, owing to the injuries received in March last by the editor-in-chief, the execution of this promise has been rendered impossible till a later issue.

ASYLUM REPORTS.

The following Asylum Reports have been received:

MAINE.—Maine Insane Hospital, for the year ending December 31, 1881.

NEW HAMPSHIRE.—Annual Report of the New Hampshire Asylum for the Insane, for the year ending March 31, 1882.

MASSACHUSETTS.—Forty-ninth Annual Report of the State Lunatic Asylum at Worcester; Twenty-eighth Annual Report of the State Lunatic Asylum at Taunton; Twenty-sixth Annual Report of the State Lunatic Asylum at North Hampton; Fourth Annual Report of the State Lunatic Hospital at Danvers; Fourth Annual Report of the Temporary Asylum for the Chronic Insane at Worcester.

RHODE ISLAND.—Report of the Butler Hospital for the Insane for the year 1881.

CONNECTICUT.—Fifty-eighth Annual Report of the Hartford Retreat for the Insane; Sixteenth Annual Report of the Connecticut Hospital for the Insane.

NEW YORK.—One Hundredth and Eleventh Annual Report of the New York Hospital and Bloomingdale Asylum for the Insane. Twenty-second Annual Report of the State Asylum for Insane Criminals; Thirteenth Annual Report of the Willard Asylum for the Insane; Report of the Brigham Hall Hospital for the Insane for the year 1881; Annual Reports of the New York City Asylum for the Insane for the years 1879 and 1880.

PENNSYLVANIA.—Sixty-fifth Annual Report of the Asylum for the Relief of Persons Deprived of the Use of their Reason; Forty-first Annual Report of the Pennsylvania Hospital for the Insane; Annual Report of the Western Pennsylvania Hospital for the Insane for the year 1881; Annual Report of the State Hospital for the Insane, at Norristown; Annual Report of the State Hospital for the Insane at Warren.

NEW JERSEY.—Annual Report of the New Jersey State Lunatic Asylum at Trenton; Annual Report of the State Asylum for the Insane at Morristown.

MARYLAND.—Annual Report of the Maryland Hospital for the Insane; Annual Report of the Mount Hope Retreat.

DISTRICT OF COLUMBIA.—Annual Report of the Government Hospital for the Insane.

VIRGINIA.—Biennial Report of the Western Lunatic Asylum of Virginia for term ending September 30, 1881; Report of the Central Lunatic Asylum of Virginia for the year ending September 30, 1881.

NORTH CAROLINA.—Report of the North Carolina Asylum for the Insane for the year ending 1881; Annual Report of the Western Kentucky Lunatic Asylum, 1881; Annual Report of the Eastern Kentucky Lunatic Asylum, 1881.

OHIO.—Forty-third Annual Report of Columbus Asylum for the Insane; Twenty-seventh Annual Report of the Dayton Asylum for the Insane; Twenty-seventh Annual Report of the Cleveland Asylum for the Insane; Eighth Annual Report of the Athens Asylum for the Insane; Eighth Annual Report of the Cincinnati Sanitarium.

INDIANA.—Twenty-third Annual Report of the Indiana Hospital for the Insane.

IOWA.—Eleventh Biennial Report of the Iowa Hospital for the Insane, Mount Pleasant; Fifth Annual Report of the Iowa Hospital for the Insane, Independence.

NEBRASKA.—Biennial Report of the Nebraska Hospital for the Insane, November, 1878-80.

MISSISSIPPI.—Biennial Report of the State Lunatic Asylum, 1880-81.

TEXAS.—Report of the State Lunatic Asylum of Texas, 1881.

WASHINGTON TERRITORY.—Biennial Report of the Hospital for the Insane, August, 1879-80.

DOMINION OF CANADA.—Fourteenth Annual Report of the Inspector of Prisons and Public Charities for the Province of Ontario; Report of the Asylum for the Insane at Toronto, 1881; Report of the Asylum for the Insane at Kingston, 1881; Report of the Asylum for the Insane at London, 1881; Reports of the Quebec Lunatic Asylums for the years 1878-79, 1879-80, 1880-81; Report of the Provincial Lunatic Asylum, St. John, N. B., 1881; Report of the Prince Edward Island Hospital for the Insane, Charlottetown, 1881; Report of the Nova Scotia Hospital for the Insane, Halifax, N. S.

Reports of Asylums in Great Britain and Ireland will be acknowledged subsequently.

THE PRIVATE INSTITUTION

At Barre, Mass.,

FOR THE EDUCATION AND TRAINING OF

Youth of Defective Intellect,

OFFERS TO

PARENTS AND GUARDIANS

THE EXPERIENCE OF

Twenty-Five Years' Successful Operation,

and all the comforts of an elegant country home.

GEORGE BROWN, M. D., Supt.

THEO. POMEROY & SON,

MANUFACTURERS OF

Pomeroy's Indestructible Paints.

MIXED AND GROUND READY FOR USE.

BROWN, SLATE, DRABS, AND OTHER COLORS.

For Shingle and Tin Roofs;

For Brick and Wood Buildings;

Such as the Painting of PUBLIC INSTITUTIONS, FACTORIES, DWELLINGS, BARNs, FENCES, IRON WORK, or Anything Greatly Exposed to the Destructive Action of the Elements.

IT EFFECTUALLY RESISTS HEAT, FROST, RAIN OR SNOW!

STOPS LEAKS AND ARRESTS DECAY!

" It contains no Iron, Acid or Poison, to Corrode Tin, or Impregnate Rain-Water. Pure Linseed Oil is the only Liquid used in its manufacture; and the other materials are as Indestructible in their nature as any can well be.

References of the Highest Character are given, with any other information, on application to

THEO. POMEROY & SON,

Office, 75 Columbia Street, UTICA, N. Y.

THE JOURNAL OF
PSYCHOLOGICAL MEDICINE
AND MENTAL PATHOLOGY.

EDITED BY

LITTLETON S. FORBES WINSLOW, M. D., D. C. L.,

Lecturer on Mental Diseases, Charing Cross Hospital.

London: Baillière, Tindall & Cox, King William Street, Strand.

New York: Wm. Wood & Co.

Philadelphia: H. C. Lea.

WORKS BY DR. L. S. FORBES WINSLOW.

Varnished, Mounted on Canvas and Rollers, 4s. 6d., Unmounted, 1s. 6d.

A LUNACY CHART,

Being a Synopsis of the Lunacy Acts, and having special reference to the Management and Care of Persons of Unsound Mind.

Also, Price 12s. 6d.

A MANUAL OF LUNACY.

"A comprehensive digest of every subject connected with the legal care of the insane.—*Med. Times and Gaz.*

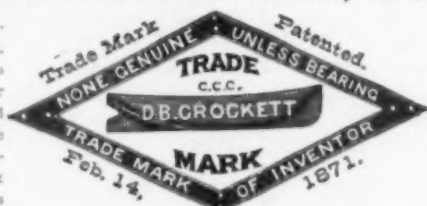
Also, Price 1s.

Handbook for Attendants on the Insane.

London: Baillière, Tindall & Cox, King William Street, Stra

C. T. RAYNOLDS & CO.,
SOLE AGENTS FOR
DAVID B. CROCKETT'S
SPECIALTIES,
106 and 108 Fulton Street, New York.

We have made arrangements with Mr. David B. Crockett, to manufacture for our house exclusively all goods formerly made by him, and would inform the public that none of his productions



can be obtained excepting through our house, or our authorized agents; the said David B. Crockett being the sole manufacturer of the following specialties:

No. 1 and 2 Preservative, or Architectural Wood Finish,
SPAR COMPOSITION,
Car and Carriage Priming or Wood Filler,
PAINTERS' COMPOSITION,
COMPOSITION COATINGS OR PAINTS.

And all the above goods to be genuine must bear the Patented Trade Mark of the Inventor.

LIST OF SPECIALTIES.

PRESERVATIVE No. 1, or ARCHITECTURAL WOOD FINISH. Directions for use.—Apply with brush, same as shellac, and let each coat dry well before applying another.

For finishing and preserving all wood in their natural beauty. Also the most durable article known for coating over grained work, such as Bath Rooms, Vestibule Doors, etc. **PRICE PER GALLON, \$2.50.**

PRESERVATIVE No. 2. Directions for use.—Have the work clean and smooth, and apply same as you would a fine finishing varnish.

The most brilliant interior finish known for churches, public buildings, and places where you wish a hard wearing surface, and as a finish over the No. 1. **PRICE PER GALLON, \$4.00.**

PRICE LIST

David B. Crockett's Composition Coatings.

C. T. RAYNOLDS & CO., Sole Agents.

Per Gall.	Per Gall.	Per Gall.
No. 1.....\$2 00	No. 13 D. Vermilion.....\$2 25	No. 29 L. Vermilion.....\$2 00
No. 2.....2 00	No. 14 D. Green.....2 00	No. 30.....2 00
No. 3.....2 00	No. 15.....2 00	No. 31.....2 00
No. 4.....2 00	No. 16.....2 00	No. 32 Marine Red.....2 00
No. 5.....2 00	No. 17.....2 00	No. 33.....2 00
No. 6.....2 00	No. 20.....2 00	No. 34.....2 00
No. 7 C. Yellow.....2 00	No. 21.....2 00	No. 35.....2 00
No. 8.....2 00	No. 22 Marine Black.....2 00	No. 36.....2 00
No. 9 L. Green.....2 25	No. 24.....2 00	No. 37.....2 00
No. 10.....2 00	No. 25.....2 00	No. 38 Inside White.....2 20
No. 11.....2 00	No. 26.....2 00	
No. 12.....2 00	No. 27.....2 00	

USE

D. B. Crockett's Spar Composition,

For Finishing FRONT DOORS, VESTIBULES, and all Places
Exposed to the Weather.

(EITHER ON GRAINED OR HARD WOODS.)

Superior to Varnish, or any Article in use for such Purposes.

(ESTABLISHED IN THE UNITED STATES IN 1840.)

Have been Awarded 3 Silver Medals, 4 Bronze Medals, and 6 Diplomas.

E. WHITELEY,
Steam and Sanitary Engineer, and Machinist,
57, 59, 61 and 63, Charlestown Street,
BOSTON, MASS.

Patentee and Manufacturer of the most improved Apparatus for Warming and Cooking purposes, for Public Institutions, consisting of Ranges, for Coal or Wood, of extra strength, with Flues of extra size, and means of cleaning the same. Also,

Patent Cast Iron Steamers, Plain or Jacketed,
Round or Square.

with removable baskets for vegetables, &c., with Copper or Galvanized Iron Covers, having Ventilating tubes, which convey the steam and odors from the kitchen. E. Whiteley's Celebrated Seamless

Patent Cast Iron Jacket Kettles,
in one piece, no bolts or packing used. Best in the World.

COPPER JACKET KETTLES.

for Tea and Coffee, thickly tinned inside, with Cylinders for the Tea and Coffee, strong and durable, will bear 75 pounds of steam; 80 gallons can be made and drawn off clear in 20 minutes. See Dr. P. Earle's report for October, 1874.

Portable Ovens, Steam Ovens or Brick Ovens.

All my work is made in my own shops, under my personal superintendence, and of the best material, and thoroughly tested and warranted.

I refer by permission to the following gentlemen:

Dr. NICHOLS, of Washington, D. .

Dr. J. P. GRAY, M. D., Utica, N. Y.

Taunton Insane Asylum, Taunton, Mass.

Eastern Lunatic Asylum, Williamsburg, Va.

Dr. C. A. WALKER, South Boston, Mass.

Dr. P. EARLE, of Northampton, Mass.

Dr. B. D. EASTMAN, Worcester, Mass.

Michigan Insane Asylum, Kalamazoo, Mich.

Tewksbury Alms House, Tewksbury, Mass.

Dr. CALVIN MAY, Danvers Insane Hospital, Mass.

And many others.

Father and Sons have been engaged in this Business for Seventy-nine Years, forty in Europe, thirty-nine in United States.

Two Silver Medals were awarded for improvements in Cooking Apparatus, at the Mechanics Fair in October, 1874, and 1878.

Improved Ranges are now in use at the National Soldiers Home, Hampton, Va.; National Soldiers' Home, (Togas,) near Augusta, Me.; State Insane Hospital, Northampton, Mass.; State Insane Hospital, Middleton, Conn.; Young's Hotel, Boston, Mass.; New City Hospital, Boston, Mass.; New City Homœopathic Hospital, Boston, Mass.; New Hospital, for Insane, Worcester, Mass; New England Hospital for Women.

1878.

IMPORTATION OF BOOKS, Etc.

AGENCY FOR THE SUPPLY OF AMERICAN, ENGLISH, FRENCH AND GERMAN **BOOKS,** Periodicals, &c., &c.

The subscribers continue to Import and to supply promptly and on the most favorable terms **AMERICAN, ENGLISH, FRENCH and GERMAN BOOKS** and **PERIODICALS**, in every department; MISCELLANEOUS, RELIGIOUS, SCIENTIFIC and MEDICAL.

They have constant communication with the principal American Publishers and Booksellers in the United States—have special agents in London and Paris, and direct correspondence with English, French, and German Publishers. Orders for a single Book or Periodical, or for Books and Periodicals in quantity, will receive their most careful attention.

Orders for Foreign Books, &c.,

are forwarded as often as once a week, and answer may be looked for within six weeks. **CATALOGUES and BIBLIOGRAPHICAL WORKS** are kept for reference, and may be consulted at all times. **Catalogues and Cheap Lists** of particular Publishers are supplied gratis on application.

SPECIAL ATTENTION given to the procurement of **RARE AND VALUABLE BOOKS, ENGRAVINGS, &c.**, for *Public and Private Libraries*.

BOOKS bound to order in **ENGLAND and FRANCE** by noted **BINDERS** for **AMATEUR COLLECTORS**.

BOOKS AND PERIODICALS can be mailed direct to any person or **Public Library**, from **England and France**.

BOOKS which have been published **TWENTY YEARS** may be imported free of duty.

PUBLIC LIBRARIES, SCHOOLS, AND COLLEGES, can import through us *two* copies of any Book, &c., free of duty.

Our Charges for Importing Books Are:

Per Sterling Shilling.....	\$0 35	currency.
Ditto, when free of duty.....	30	"
Per Franc.....	30	in gold
Ditto, when free of duty.....	26	"
Per Reichsmark.....	36	"
Ditto when free of duty.....	30	"

WHEN FROM SECOND-HAND ENGLISH CATALOGUES.

Per Sterling Shilling.....	36	"
Ditto, when free of duty.....	30	"

JOHN WILEY & SON,

15 Astor Place, New York, Publishers and Importers.

* * We publish many valuable scientific Text-Books and Practical Works, and keep on hand a large stock of Books in various departments of Science.

JOSEPH NASON & CO.,
71 Beekman and 71 Fulton Streets,
NEW YORK.

MANUFACTURERS OF

Plain & Galvanized Wrought Iron Pipe,

STEAM AND GAS FITTINGS,

FITTER'S TOOLS AND APPARATUS, AND MACHINERY,

Of every description pertaining to the

Warming, Ventilating, Lighting,

Water Supply, and Sewerage of Hospitals.

Their stock comprises the largest assortment of

IRON PIPE FITTINGS, BRASS, AND BRASS MOUNTED GOODS,

And articles of a more special character, adapted to nearly every process within the range of steam heating.

FOR STEAM BOILERS.

Glass Water Gauges, Percussion Water Gauges, Safety Valves, Steam Gauges, Steam Pressure, or Damper Regulators, Low Water Alarms, &c., &c.

STEAM COOKING APPARATUS.

Kettles with Steam Jackets for Boiling, Vessels for Steaming, Hot Closets, Steam Carrying Dishes, &c.

LAUNDRY APPARATUS.

Washing Machines, Centrifugal Drying Machines, Tanks and Coils for Heating Water Starch Boilers, Steam Pipes and Fixtures for Drying Rooms.

IMPROVED STEAM TRAPS—For Draining Steam Pipes, Kettles, &c., without waste of steam.

JOSEPH NASON & CO'S PATENT VERTICAL PIPE RADIATOR—Over one hundred sizes. Combining the greatest simplicity of construction with propriety and elegance of design, and readily adapted to any part of a room requiring warmth by direct radiation.

HAIR FELTING—For Covering Steam Pipes and Boilers.

H. R. WORTHINGTON'S DIRECT ACTION AND DUPLEX STEAM PUMPS.

J. N. & Co. also construct to order **Ventilating Fans**, of any required capacity, of the best form for useful effect, and with all the improvements derived from their long experience in applying these machines to many of the larger hospitals, and to the United States Capitol at Washington.

DIAPHANITE.

"THE NATURAL WOOD FINISHER."

Comstock Bros. & Co.,

MANUFACTURERS,

UTICA, N. Y.

We wish to call attention to the most beautiful and durable preparation for finishing natural and grained woods ever put on the market.

Diaphanite will fill the pores and develop the natural beauty of the wood.

It brings out all of the fine effects of light and shadow with great brilliancy.

It will not crack, blister, or turn white. As a finish over natural woods, grained work, outside doors, inside blinds, floors, &c., &c., IT HAS NO EQUAL. It is a certain preventative against dampness and foul matter, which if this be not applied would be absorbed by the wood.

Diaphanite has been used in many State and County Buildings, where it is absolutely necessary to prevent absorption.

It is very elastic and is applied with a brush the same as finishing varnishes.

COMSTOCK BROS. & CO., UTICA, N. Y.

The Inebriates Home, Fort Hamilton, N. Y.



INCORPORATED 1866.

A Hospital for the Treatment of ALCOHOLISM and the OPIUM HABIT.

President and Consulting Physician, THEODORE L. MASON, M. D.
Attending Physician, - - L. D. MASON, M. D.
Superintendent, - - - J. A. BLANCHARD, M. D.

Patients are received either on their application or by due process of law. For mode and terms of admission apply to the Superintendent, at the Home, Fort Hamilton, (L. I.), New York.

Two daily mails and telegraphic communication to all parts of the country.
HOW TO REACH THE INSTITUTION FROM NEW YORK.—Cross the East River to Brooklyn on Fulton Ferry boat, and proceed either by Court Street or Third Avenue horse cars to transfer office; or, cross from South Ferry on Hamilton Avenue boat and proceed by Fort Hamilton cars to transfer office, thence by steam cars to the Home. Request the conductor to leave you at the Lodge Gate.

Fellows' Hypo-Phosphites

Contains **THE ESSENTIAL ELEMENTS** to the Animal Organization

—Potash and Lime;

The **OXYDIZING AGENTS**—Iron and Manganese;

The **TONICS**—Quinine and Strychnine;

And the **VITALIZING CONSTITUENT**—Phosphorus,

Combined in the form of a Syrup, with *slight alkaline reaction*.

IT DIFFERS IN EFFECT FROM ALL OTHERS, being pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION in America and England for efficiency in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs, and is employed also in various nervous and debilitating diseases with success.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive qualities, whereby the various organic functions are recruited.

IN CASES where innervating constitutional treatment is applied, and tonic treatment is desirable, this preparation will be found to act with safety and satisfaction.

ITS ACTION IS PROMPT, stimulating the appetite, and the digestion, it promotes assimilation, and enters directly into the circulation with the food products.

THE PRESCRIBED DOSE produces a feeling of buoyancy, removing depression or melancholy, and hence is of great value in the treatment of **mental and nervous affections**.

From its Exerting a double tonic effect and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

Each Bottle of Fellows' Hypophosphites contains 128 doses.

Prepared by **JAMES I. FELLOWS, Chemist,**
48 VESEY STREET, - - NEW YORK.

Circulars and Samples Sent to Physicians on Application.

SPECIAL TO PHYSICIANS.—**ONE** large bottle containing 15 oz. (which usually sells for \$1.50) will be sent upon receipt of **Fifty Cents** with the application, this will be applied to the prepayment of Expressage, and will afford an opportunity for a thorough test in Chronic cases of Debility and Nervousness. Express Charges prepaid upon all samples. **FOR SALE BY ALL DRUGGISTS**

THE AMERICAN JOURNAL OF INSANITY.

THE AMERICAN JOURNAL OF INSANITY is published quarterly, at the State Lunatic Asylum, Utica, N. Y. The first number of each volume is issued in July.

EDITOR,

JOHN P. GRAY, M. D., LL. D., *Medical Superintendent.*

ASSOCIATE EDITORS,

EDWARD N. BRUSH, M. D.,

SELWYN A. RUSSELL, M. D.,

ELI E. JOSSELYN, M. D.,

G. ALDER BLUMER, M. D.,

Assistant Physicians.

THEODORE DEECKE, *Special Pathologist.*

TERMS OF SUBSCRIPTION,

Five Dollars per Annum, in Advance.

EXCHANGES, BOOKS FOR REVIEW, and BUSINESS COMMUNICATIONS may be sent to the EDITOR, directed as follows: "JOURNAL OF INSANITY, STATE LUNATIC ASYLUM, UTICA, N. Y."

The JOURNAL now opens its thirty-ninth volume. It was established by the late Dr. Brigham, the first Superintendent of the New York State Lunatic Asylum, and after his death edited by Dr. T. Romeyn Beck, author of "Beck's Medical Jurisprudence," and since 1854 by Dr. John P. Gray, and the Medical Staff of the Asylum. It is the oldest journal devoted especially to Insanity, its Treatment, Jurisprudence, &c., and is particularly valuable to the medical and legal professions, and to all interested in the subject of Insanity and Psychological Science.